NYU IFA LIBRARY
3 1162 04538653 0

UNIVERSITY OF PENNSYLVANIA
EGYPTIAN DEPARTMENT OF THE UNIVERSITY MUSEUM

ECKLEY B. COXE JUNIOR EXPEDITION TO NUBIA:
VOL. II

CHURCHES IN LOWER NUBIA

BY

GEOFFREY S. MILEHAM

EDITED BY

D. RANDALL-MACIVER

PUBLISHED BY THE UNIVERSITY MUSEUM
PHILADELPHIA

MCMX

The McAfee Library of Ancient Art

NEW YORK UNIVERSITY LIBRARIES
INSTITUTE OF FINE ARTS

UNIVERSITY OF PENNSYLVANIA
EGYPTIAN DEPARTMENT OF THE UNIVERSITY MUSEUM

ECKLEY B. COXE JUNIOR EXPEDITION TO NUBIA:
VOL. II

CHURCHES IN LOWER NUBIA

BY

GEOFFREY S. MILEHAM

EDITED BY

D. RANDALL-MACIVER

PUBLISHED BY THE UNIVERSITY MUSEUM
PHILADELPHIA

M CM X

Fine Arts
DT
135
.N8P4
v.2

Letter Press and Printing by
The John C. Winston Co.
Philadelphia, Pa., U. S. A.

Collotypes and Process Blocks by
Horace Hart
Clarendon Press, Oxford, England.

In the Same Series

Vol. I

AREIKA

by D. Randall-MacIver and C. Leonard Woolley

Price $5.

Vols. III and IV

KARANÒG
THE ROMANO-NUBIAN CEMETERY

by C. Leonard Woolley and D. Randall-MacIver

Price $20.

To be obtained at the University Museum,
Philadelphia, Pennsylvania, U. S. A.

Agent for Europe: Henry Frowde,
Amen Corner, Paternoster Row, London.

PREFACE

This volume is the second of a series which will record the results of explorations in Egypt, planned and financed by Mr. Eckley B. Coxe, Junior, of Philadelphia. By an agreement made with the University of Pennsylvania, in January, 1907, the expeditions are to be conducted on behalf of the University, and the antiquities obtained will be presented to the University Museum.

The volume is edited by the curator of the Egyptian Department of the Museum, who discovered the sites and to a great extent supervised the work upon them which is described. The author is an English architect who was attached to the staff during the seasons of 1908 and 1909, for the special purpose of making technical studies of the Early Christian buildings of Lower Nubia. His researches have been confined to the Southern part of the country between the two cataracts, and may be said to form a complete monograph on that part of the district, from Faras to Halfa inclusive, which belongs to the Anglo-Egyptian Sudan.

It is hoped that this book may serve to awaken public interest in a subject which has hitherto been much neglected, the history of Early Christian architecture in Egypt. It is our aim to show that this is worthy of study, both for its own sake and in connection with the Byzantine architecture of Europe and Asia. We present this memoir in the form of a simple record of observations, preferring to leave to future writers who may command a greater store of comparative material the task of drawing historical analogies and conclusions.

G. S. M.

D. R. M.

CONTENTS

PAGE

PREFACE. vii

CHAPTER I

GENERAL INTRODUCTION 1

CHAPTER II

NUBIAN CHURCH CONSTRUCTION 7

CHAPTER III

THE CHURCH NEAR DEBÊREH 14

CHAPTER IV

FARAS 22

CHAPTER V

THE NORTHERN CHURCH AT FARAS 27

CHAPTER VI

THE SOUTHERN CHURCH AT FARAS 31

CHAPTER VII

THE TWO CHURCHES NEAR ADDENDAN 37

CHAPTER VIII

THE ANCIENT FORTRESS AND THE CHURCHES AT SERREH 40

CHAPTER IX

THE CHURCH NEAR WADY HALFA 48

LIST OF ILLUSTRATIONS IN THE TEXT

PAGE

The Process of Modern Vaulting 9

Detail of Relieving Arch over Doorway 10

Plan of Church at Figiranton 12

Construction of Apse Vault 15

Lintel to North Door, near Debêreh 17

Objects found in Church near Debêreh 20

Doll from Ditch at Faras 23

Tombs in Southern Church, Faras 32

Base from Haikal of Southern Church, Faras 33

Objects found in Southern Church, Faras 35

Bronze Ornament from North Domed Church, Serreh 43

Ancient Granite Block in South Domed Church, Serreh 45

Granite Capital and Base of Column in Southern Church, Serreh 46

Granite Column from Doorway of Southern Church, Serreh 47

Restoration of a Painting on wood found in Church near Wady Halfa 50

Objects found in the Church near Wady Halfa 52–56

LIST OF PLATES

PLATE

1. Coloured Frontispiece.

2. (*a*) Begrash, The Gate. (*b*) Kasr Ibrim from the North. (*c*) Kasr Ibrim: View of the Interior of the Church Looking East.

3. (*a*) Kelaa-t-adda: View from the River. (*b*) Wiss: The Principal Building from the North. (*c*) Wiss: The Principal Building from the East.

4. The Church Opposite Debêreh. (*a*) View from the North. (*b*) Interior Looking East.

5. The Church Opposite Debêreh. (*a*) View from the South. (*b*) View from the Northwest.

6. The Church Opposite Debêreh. (*a*) Capital from Arch of Triumph. (*b*) Cross Design on Lintel from North Door. (*c*) Interior Looking West.

7. The Church Opposite Debêreh. Stela Found in Haikal.

8. The Church Opposite Debêreh. Plan. Longitudinal Section.

9. The Church Opposite Debêreh. Cross Section. Cross Section (Restored). Longitudinal Section (Restored).

10. Sketch Map of the District of Faras.

11. Faras, The Fortress. (*a*) The Central Building from the North. (*b*) The Central Building from the Southwest. (*c*) The Fortress Wall and Central Building from the West.

12. Faras. (*a*) Remains of Church, Partly Rock-cut. (*b*) The Gate in the Fortress Wall. (*c*) General View of Faras from the West.

13. Faras, The Northern Church. (*a*) Entrance to the Tomb at East of Church. (*b*) Interior of Church Looking East.

14. Faras, The Northern Church. Plan.

15. Faras, The Northern Church. Cross Section. Longitudinal Section.

16. Faras, The Southern Church. (*a*) Interior Looking West, before Excavation. (*b*) Interior Looking East, Showing Tribune, Altar and Pulpit.

17. Faras, The Southern Church. Plan.

18. Faras, The Southern Church.

19. Faras—Pottery from the Churches. (*a*) Cup or Chalice from South Church. (*b*) Bowl from North Church. (*c*) Bowls from North Church, Faras. (*d*) Bowls from South Church, Faras.

PLATE

20. Pottery Lamps. (*a*) From South Church at Faras. (*b*) From Tomb in South Church. Faras. (*c*) From Church near Halfa. (*d*) Lamps from Faras and Halfa (*e*) Lamps from South Church at Faras.

21 The Northern Church near Addendan. (*a*) View from the South. (*b*) Interior Looking East.

22. The Northern Church near Addendan. (*a*) View of Vaulting to the South Aisle from the Haikal. (*b*) The South Aisle Looking East.

23. The Northern Church near Addendan. Plan.

24. The Northern Church near Addendan. Cross Section. Longitudinal Section.

25. The Domed Church near Addendan. (*a*) View from Southwest. (*b*) Sketch of Church (Restored) from the Southeast.

26. Addendan. (*a*) Capital from the North Church. (*b*) The Domed Church, Interior Looking West. (*c*) The Domed Church, Southeast, Cupola from Inside. (*d*) The Domed Church, Southeast, Cupola from Outside.

27. The Domed Church near Addendan. Plan. Longitudinal Section.

28. The Domed Church near Addendan. Cross Section. Detail of Brickwork, North Aisle Wall.

29. East Serreh. (*a*) View of Southern Half of the Town. (*b*) View of Northern Half of the Town. (*c*) General View of the Town from the River.

30. East Serreh. (*a*) Plan of Central Domed Church. (*b*) Plan of the Fortress, showing Position of the Churches.

31. East Serreh, The Central Domed Church. (*a*) Interior Looking East. (*b*) View of Dome from the South. (*c*) View from the West.

32. East Serreh. (*a*) The North Domed Church from the South. (*b*) The Fortress Wall, South Side.

33. East Serreh, The South Domed Church. (*a*) The North Door. (*b*) View at Roof Level from Northeast. (*c*) View from the Southwest.

34. East Serreh, The North and South Domed Churches. (*a*) Plan of the North Domed Church. (*b*) Plan of the South Domed Church.

35. East Serreh, The North and South Domed Churches. Cross Sections. Longitudinal Sections.

36. East Serreh, The South Church. Plan.

37. The Church near Wady Halfa. View from Northeast, Showing Altar of Latest Period. Plan.

38. The Church near Wady Halfa. (*a*) Brass Bells Found in Staircase. (*b*) Iron Crosses Found in Haikal. (*c*) Granite Bowl.

39. Map of the River Nile, Showing Position of the Sites.

CHAPTER I

GENERAL INTRODUCTION

Value and Interest of Early Christian Buildings in the Nile Valley.

The tourist who travels from Aswan to Halfa on a luxurious steamboat seldom even notices the existence of numerous buildings of which his guide book gives no explanation or description. If it so chances that his eye is caught for a moment by a structure more imposing than common, he sees perhaps that it is built of mud brick and dismisses it with contempt as probably modern. A liberally educated dragoman will perhaps tell him that it dates from Dervish times, some listless bystander will evolve original observations on bricks made with straw, and perchance one of those who turn to draw the bow at a venture will hazard the word "Coptic." The idea that there can be any interest in a Coptic building will be so remote from the minds of many that the subject will be dismissed as unworthy of further consideration.

The opprobrium which some archæologists have attached to the word Coptic may easily be understood. To them the Copt figures simply as a destroyer, the man who scribbled graffiti on the walls and statues, who mutilated the sanctuaries of Egyptian temples and turned them to the purpose of his own worship; the vandal, in fact, who profaned and demolished all that the scholar interested in the art of ancient Egypt holds dear.

It is only of late years that those possessed of a truer historical sense have realized that the development of Egypt is continuous; that it does not cease with the founding of the Roman Empire, with the introduction of Christianity or with the invasion of the Mohammedans; but that the Roman, the Christian and the Mohammedan periods have each their interest and their importance. It is these periods which link the past with the present, which connect us of the twentieth century after Christ with Egypt of sixty centuries ago; and if they formed nothing but a bridge, that bridge is so valuable to us that it cannot be neglected. But, if we may continue the metaphor, the bridge itself is a structure of no little grandeur and magnificence, of no little wealth in detail of ornament and sculpture, carving, picture and text.

The truer view is gradually winning recognition. Roman antiquities in Egypt are no longer despised because they do not date from the time of the Pyramid builders, Mohammedan art is studied with enthusiasm by all lovers of the beautiful. The early Christian period alone has been neglected and that in great measure owing to the unhappy prejudice against everything that is nicknamed "Coptic."

For many years it was supposed that the early Christian inhabitants of Egypt conferred only one benefit upon the world, and that as it were by accident—they had preserved the remains of the hieroglyphic language in their service books and theological works. That they had arts and industries deserving of study remained a secret known only to the discerning few, and, until the publication of Butler's "Coptic Churches,"* perhaps no one in Europe even suspected how much of permanent value these early Christians had contributed to the history of Architecture.

Butler's work was confined to Cairo and the Natron Valley, and though in recent years the Red and White Monasteries at Sohag have been rescued from neglect, and steps are now being taken to preserve many of the ancient churches and monasteries which are still in use,

*The Ancient Coptic Churches of Egypt. Alfred J. Butler, M. A., F. S. A., Oxford, The Clarendon Press, 1884.

Value and Interest of Early Christian Buildings in the Nile Valley.

yet the general student can have but little idea of the great number of early Christian churches and secular buildings which exist in remoter regions.

It was in the hope of awakening interest in this neglected field that the Eckley B. Coxe, Jr., Expedition of the University of Pennsylvania entrusted me with the task of studying some representative examples of early Christian architecture in the southern half of Lower Nubia. Accompanying Dr. Randall-MacIver, who kindly assisted me in the field-work and directed the workmen in their excavations, I made a number of studies in the spring of 1908, which were amplified and completed in 1909. A new and unsuspected chapter in the history of Architecture was gradually unfolded to our view and it is the object of this volume to make it known to a wider circle of students.

Date of the Conversion of Nubia to Christianity.

When the Mohammedan conquerors first penetrated into Nubia (640 to 641 A. D.) they found the country to be a stronghold of Christianity. It had then, however been converted only a short time, for though occasional fugitives may have come in from Egypt during the preceding centuries the general Christianization of Lower Nubia is not earlier than the reign of Silko, the king who warred against the still pagan Blemyes in the middle of the sixth century A. D. Silko himself was the first Christian king of the northern part of Lower Nubia and to the time of one of his successors, Eirpanome (circa 559 A. D.), belongs the Church of Dendur, probably the earliest in this region. South of Maharraka, Nubia remained pagan until the power of the Blemyes had been broken. It was the victory of Silko which made possible the two missions of evangelization sent immediately afterwards from Byzantium: the one by the Emperor Justinian and the other by the Empress Theodora.

The members of this latter mission were Monophysites, as the Empress herself was an ardent supporter of that heresy. The former mission appears to have been delayed in Egypt and the first Nubian converts were made by the Jacobites. The withdrawal of the Monophysite mission by the Empress afforded to the orthodox mission the opportunity of bringing the Nubian church into line with the orthodox Eastern Church and it appears to have remained subject to Constantinople for nearly a century.

Mediæval Descriptions and Geography.

The account of Nubia given by Quatremère in extracts from the work of mediæval writers contains a good description of the country, which, although it is not as lucid as might be desired, throws some light on the geographical and political conditions.*

At first glance the various mentions of places in Nubia are confusing, but careful study shows that they are consistent. It is difficult, however, to assign exact positions to many places mentioned, as the influence of the Mohammedan invasion and the shifting of the population during various internal troubles have caused a complete change in many of the places named. The clearest account is given by Abdallah ben Ahmad ben Solaim, who describes the limits of two extensive Nubian kingdoms on the upper reaches of the Nile. The first Nubian town reached from Egypt was at Al-Kasr, the name signifying the Castle, a few miles to the south of Aswan, and, therefore, at the upper end of the cataract which formed the natural strategical boundary between Egypt and the country of the black races as it had often done in former centuries.

From Al-Kasr to "the first cataract which forms part of Nubia" the distance is stated to have been ten days journey.† A later mention of this "first cataract" by the same author, Abdallah ben Ahmad ben Solaim, shows that he refers to the cataract which is now called the "second," for he says that it begins at a town called Bakouy which is the port where the boats stop which

*Mémoires géographiques et historiques sur l'Egypte, et sur quelques Contrées voisines. Par Et. Quatremère, Paris, 1811, Vol. II.

†Voici ce que dit Abdallah ben Ahmed ben Solaïm de la ville d'Asouan, dans son ouvrage intitulé: Histoire de la Nubie, du Makorrah, d'Alouah, du Be'jah et du Nil.

La Nubie commence au bourg nommé Al-Kasr (le Château), situé à cinq milles de la ville d'Asouan . . . . . .

De ce bourg à la première cataracte, qui fait partie de la Nubie, la distance est dix journées . . . . . (Quatremère, Vol. II, pp. 6, 7.)

Mediæval Descriptions and Geography

come up from Al-Kasr and that between this former place and Maks there are six stations, in a wild and barren district, and he dwells at great length on the rocky nature of the country and the succession of rapids.* This is a very truthful description of the country now called the Batn-el-hagar, Belly of Stones, which lies immediately to the south of the second cataract of the Nile; and the fact that the boats stopped at the entrance to the cataract accords with the existing conditions, because for all ordinary purposes it is impracticable to pass the second cataract by water.

The Two Kingdoms of Nubia.

According to the accounts collected by Quatremère the Northern Nubian kingdom which was called Makorrah appears to have extended as far south as the Atbara River and the whole of the country from Al-Kasr to that point was then subject to the King of Dongola. The southern kingdom was called Alouah or Alwah (in the Coptic texts ΑΛΟΤΔΙΑ) and included the "seven rivers of the Nile," that is to say, the Atbara, the White and Blue Niles and their tributaries, but the southern boundaries of this kingdom are in no way defined by the various historians. The capital of this kingdom, Alouah, Souiah or Swiah, was situated at the junction of the White and Blue Niles on the east of the northern extremity of the large island formed by the two rivers. Thus the town must have occupied the position of modern Khartoum if the "island" is to be considered to mean the land between the two rivers, or else it must have been built on such a site as the present island of Touti which adjoins Khartoum.

In the present volume we do not deal further with the kingdom of Alouah, but it may be noted that the inhabitants were Jacobite Christians and that their Bishops were subordinate to the Patriarch of Alexandria.

Province of Maris.

From the various accounts given by the Arab historians of the Northern Nubian kingdom it appears that the country was divided into well-defined provinces ruled by almost independent chiefs who were subject to the king. The province which comes under our immediate consideration extended from Al-Kasr on the north to the southern end of the Batn-el-hagar. The name given to it was Maris and it was governed by an extremely powerful chief who bore the title of Lord of the Mountain.†

Three large fortress towns are mentioned as situated in his domain—Bedjrasch (Begrash) the capital of the province, Ibrim and Adwa. It is noted that Adwa, called Daw by both Macrizy and Nowairy, was a port for vessels.‡

*La première cataracte de la Nubie commence au bourg nommé Bakouy.

C'est un port ou s'arrêtent les barques de Nubie, qui remontent d'Al-Kasr, frontière de ce royaume. Personne, Musulman ou autre ne peut pénétrer plus avant, sans la permission du Seigneur de la Montagne.

Delà au Maks supérieur, on compte six stations. Tout cet espace n'est qu'une suite de rochers arides. C'est le plus affreux canton que j'aie vu dans tout le royaume, à raison de l'inégalité et du peu de largeur du terrain, et de la difficulté des chemins. D'un côté, le Nil est tout semé de rocs et de montagnes qui obstruent son lit, en sorte qu'il ne coule qu' au travers des ravins; et dans quelques endroits il se rétrécit tellement qu'il n'a pas plus de cinquante coudées d'une rive a l'autre. (Quatremère, Vol. II, p. 9.)

†La province qui touche à la ville d'Asouan et aux frontières du Saïd, se nomme Maris. C'est elle qui donne son nom au vent Marisy. Cette Contrée est habitée par des hommes libres. Quant aux habitans du reste de la Nubie, ils sont tous esclaves de leur roi. (Quatremère, Vol. II, pp. 29, 30.)

‡C'est dans cette province qu'est située la ville de Bedjrasch, capital edu Maris, la forteresse d'Ibrîm, et une autre place nommée Adwa, qui a un port, et qui est, dit-on, la patrie du sage Lokman, et de Dhoul-Noun. On y voit un *berba* magnifique. Le gouverneur de cette province, relève du souverain de la Nubie, et prend le titre de Seigneur de la montagne. C'est un des puissans officiers du royaume, à raison des avantages que lui procure le voisinage des terres de l'islamisme. En effet, tous les Musulmans qui entrent en Nubie, trafiquent avec lui, ou lui offrent des présens pour lui et pour son maître; il reçoit tout, et donne des esclaves en échange. Il ne permet à personne, Musulman ou autre, de se rendre auprès du roi. La première cataracte de la Nubie commence au bourg nommé Bakouy. C'est un port ou s'arrêtent les barques de Nubie, qui remontent d'Al-Kasr, frontière de ce royaume. (Quatremère, Vol. II, pp. 8, 9.)

Kasr Ibrîm. The fortress of Ibrim is well known to all visitors to Lower Nubia owing to its commanding situation on one of the three spurs of the high sandstone plateau of the eastern desert which juts out to the water's edge just to the south of the modern village of Ibrim, and about 120 miles south of the Cataract of Aswan. (Pl. 2. Fig. *b*.)

The fortress is a striking feature as viewed from the river, and can be seen for several miles from both up and down stream. It dates from the time of Petronius (B. C. 23), who fortified the place as a frontier station of the Romans against the Meroïtic power. Fragments of earlier Meroïtic work are incorporated in the Roman walls, which have been little altered in succeeding centuries, though the town has been frequently occupied in mediæval and almost modern days.

The most striking building within the walls is the church, which must have been one of the finest examples of Christian building in the Nile Valley, and although it has been much damaged and was altered considerably when it was converted into a mosque, it stands very complete in many of its parts. All the walls were carried up in finely dressed ashlar, the courses being somewhat less in depth than in the buildings erected under the Roman Empire, and occasional baulks of timber were built into the stonework to distribute the pressure, a method which was often employed in the Cairene churches. Most of the exterior walls of the church are standing to a height of over two metres, and at the west end of the south aisle there is a projecting bay containing the staircase, which is fairly intact. The plan of the church seems to have consisted of a nave with two aisles on either side and the usual apsidal sanctuary or Haikal. The aisles were divided by an arcade of three masonry arches of horse-shoe form and the inner aisles were separated from the nave by colonnades. (Pl. 2, Fig. *c*.)

Begrash. The name Begrash has been assigned on most of the published maps of the Nile to a ruined town (called by the Nubians Sheikh Daoud) which lies some twelve miles to the north of Kasr Ibrîm on the west bank of the river, and like the latter is built on a rocky eminence, but is separated from the river by a wide belt of richly cultivated land on which stands the village of Tomas. Both of these ruined towns are enclosed by thick walls and have extremely narrow entrances and the whole of the enclosed space in each case was thickly covered with houses, mere passages being left for access. The town has been so much ruined that little idea can be formed of its original arrangement without extensive clearing and excavation, though the north wall and part of the west wall, including the gatehouse, are in good preservation.

The gatehouse was built near the centre of the west wall and the entrance was effected from the south so that enemies attacking exposed the unshielded side to the defenders on the wall. Both the inner and outer gates have arched heads, and the outer one is of stone laid without mortar and has a double fillet worked on the voussoirs which stops on the customary impost (Pl. 2, Fig. *a*). Carefully dressed ashlar laid without mortar was employed for the walling of the lower part of this gatehouse, the surface being dressed after fixing; above the impost the walls were carried up in rubble with an upper story in brick. The inner arch is of simple crude brick, of skew form and without any embellishment. The enclosing walls of the town comprise an area of about 100 metres by 70 metres, with a narrow front to the river. They are built of rubble and the average thickness at the base is about two and a half metres, the thickness varying with the ground level as the walls have a slight batter. A large bastion on the north side, which guarded a gully sloping up from the lower ground to the plateau upon which the town stood, is very carefully built, and its angles are strengthened by the use of very long stones for the quoins. The floor of the town must have been originally very uneven and very steep in parts, and to obviate the difficulty of building dwellings on such sloping ground, the rock was quarried out in terraces and in some cases rectangular chambers were cut back into the solid rock. The stone thus obtained was used for the town wall and the dwellings and in some places for making up the ground to form a level terrace,

Kelaa-t-Adda.

There is no ancient site which is now named Adwa or Daw, though it is possible that the name Adda may be a corruption of the ancient form. The extensive town which spreads over an isolated hill a few miles to the south of the well-known temples of Abu Simbel is locally known as Kelaa-t-Adda, and resembles the two towns already described in its strategical position as well as in the style of its buildings. It is therefore reasonable to suppose that it is the third fortress town of the province of Maris, for there is no other ruin of sufficient importance to be put in the same category with Ibrîm and Begrash. The hill upon which the town was built stands on the east bank of the river quite close to the water's edge, and it is very steep on all sides, though a long spur on the north side slopes down to the river and forms a sort of bay between it and the southern part of the hill (Plate 3, Fig. *a*). Perhaps this was the situation of the port to which reference is made by Abdallah ben Ahmad ben Solaim. A narrow roadway leads up to the town along the spur, which was defended at the lower end by strongly fortified towers. The roadway, which is stepped in places, is very steep and winds between the ruined houses which are crowded one behind the other on the sloping ground. The interior of the town is much like Kasr Ibrîm, though it lacks the fine church, for the only ecclesiastical building now standing is a ruined church of crude brick standing on the left side at the top of the approach.

On the northeast side of the town there is a projecting rectangular platform built up with fine ashlar walls which seem to have formed the stylobate of a temple of Blemyan date.

The ashlar walling makes a return to the northeastern angle of the town and runs for some distance along the east side of the hill. At the southwest corner of the hill, which is its highest point, there are scattered fragments of granite columns, which indicate the former existence of an important church. There is also a much battered sandstone capital of extraordinary form lying on the rock. Four large smooth leaves form the square faces at the top of the capital and the angles of the abacus are supported by volute-like brackets. Many fragments of interest are to be seen in the gully lying between this south peak of the rock and the long sloping ridge, and among them the most noticeable are some broken capitals carved in red sandstone. These capitals are of less debased form than the one to which reference has been made and the design is almost directly derived from the Ionic Order.

The District between Kelaa-t-Adda and the Second Cataract.

About fourteen miles to the south of Kelaa-t-Adda is the modern administrative boundary between Egypt and the Sudan, which crosses the river to the south of the village of Addendan on the east bank of the Nile. Just at this point two or three islands divide the stream—the two largest at the present day being the island of Addendan in Egypt and the island of Faras on the Sudanese side of the boundary. But in the past the richly cultivated land on the west bank where is the cluster of villages collectively called Faras also formed an island which must have been the most important of the group judging from the ruins of ancient buildings which were erected on it. The geography of this district is of sufficient importance to be treated in a separate chapter.

In the various extracts published by Quatremère there are several other places mentioned in this province, though none of them of such importance as the three fortresses. At the foot of the second cataract there was a monastery dedicated to SS. Michael and Kosma according to Abu Selah,* and there are references to the island of S. Michael by other authorities. On the second island of the cataract from the north end, there stands the ruin of a large monastery, which unfortunately is much encumbered by a fort built during the dervish troubles. This island is called Meilnarti (Meil = Michael (?), arti = island) by the natives of to-day, so that it may be the site of the historic monastery.

*Au rapport d'Abou-Selah, Bedjrasch, capitale du Maris, est une ville bien bâtie et fort peuplée. A l'entrée de la province de Makorrah est un monastère sous l'invocation de Safanouf, roi de Nubie. Il est placé au pied de la seconde cataracte. Le monastère de Mikaïl et Kosma, est fort vaste. On y voit un sycomore qui indique chaque année le moment de la crue et de la baisse des eaux du Nil. (Quatremère, Vol. II, pp. 31, 32.)

The District between Kelaa-t-Adda and the Second Cataract

The Monastery of Daira is also noted by Abu Selah in connection with a temple near it which stands "between two high mountains,"* a description which is not clear—though it is possible that the Temple of Abu Simbel may be intended. The same authority also mentions Bawsaka, the residence of the Lord of the Mountain. This statement taken into consideration with the fact that there were many churches at Bawsaka,† has led the author to believe that the ruins of Faras represent this ancient town. However, there may be other sites yet undiscovered to which this description would apply.

Slight additional evidence is given in favour of this theory by the same historian's reference to the monastery of Abu-jeras, the residence of a bishop, which was built "on the mountain of Zidan on the west bank of the river," for the only site which would suit this description is the cluster of ruins called Wiss, situated some two kilometres from Faras. If this is indeed the monastery mentioned the resident bishop must have held the see of Bucoras, (unless Abu-jeras and Bucoras are synonymous,) for an encyclical letter in Coptic mentions seven bishoprics in the kingdom of Makorrah, namely, Korta, Ibrîm, Bucoras, Dongola, Sai, Termus and Suenkur.

*Prés du monastére de Daïra, est un berba placé entre deux montagnes élevées. Bawsaka est une ville belle, florissante, et qui a une nombreuse population. On y voit quantité d'églises, et un monastère sous l'invocation de S. Schenoudi. Cette ville étoit la résidence du Seigneur de la montagne, auquel George, fils de Zakarie, fit créver ess yeux. C'est là que fut arrêté prisonnier Abou-Rakwah al-Walid ben Hescham, au mois de Reby-al-awal, de l'an 397. Près de cette ville est une mine d'or. Sur la montagne de Zidan, du côté de l'occident, est le monastère d'Abou-djeras, situé dans une belle ville, qui est la résidence d'un évêque. (Quatremère, Vol. II, p. 32.)

†Dans la Nubie, dit Vansleb, il y avoit autrefois, selon le même manuscrit ci-dessus cité (une lettre encyclique, en langue copte, publiée par le père Bonjour), trois provinces divisées en dix-sept évêchés.

Dans la province de Maracu, il y en avoit sept, qui étoient: 1° Celui de Korta, 2° d'Ibrîm, 3° de Bucoras, 4° de Dunkala, qu'on prononce Dungala, 5° de Sai, 6° de Termus, 7° de Suenkur.

(*Note:* Maracu—name given in the Coptic texts for Makorrah.) (Quatremère, Vol. II, p. 36.)

CHAPTER II

NUBIAN CHURCH CONSTRUCTION

Before proceeding to particular descriptions of the churches of the district, it would be well to give a slight review of the general methods of planning and construction adopted in Nubia, and in order to appreciate the growth of the distinctive character of the buildings, a consideration of the various natural and social conditions is essential.

Geographical and Political Influences.

The geographical position of Nubia has played a most important part in the determination of its arts. Placed at the southern extremity of the ancient Egyptian Empire, it formed a sort of buffer between the Egyptian civilization and the semi-barbarism of the black races of the Nilotic Sudan.

It would not be to our present purpose to dwell upon the history of the various expeditions into Nubia organized from time to time by the Dynastic Kings with a view to extension of territory, or to attempt to trace the influence of the Egyptian settlers upon the native arts. But it is worthy of notice that the Nubians had absorbed much of Egyptian culture by the time of the founding of the powerful Meroitic Kingdom, and that at a later period they were affected to a considerable degree by Hellenistic art.

During the first period of the Roman Dominion in Egypt part of Lower Nubia was occupied by military garrisons, but from the year 297 A. D., when Diocletian withdrew his forces from Nubia and placed the southern boundary of the Roman province of Egypt at Aswan, the inhabitants of the country south of the first cataract were less closely in touch with the rest of the Roman world, except for the short period between the introduction of Christianity into Nubia and the Mohammedan conquest of Egypt.

The Byzantine Influence.

The mission sent by the Empress Theodora about the year 540 A. D., to which reference has been made, must have had considerable influence upon the development of architecture. The principles of the domed structure had by then been thoroughly worked out in the eastern Empire and Byzantine architecture was at its zenith, Santa Sophia and SS. Sergius and Bacchus at Constantinople, and much of the Byzantine work at Ravenna having been completed.

It would be natural therefore to assign to this period those fragments exhibiting distinctly Byzantine features which have been found on many of the most ruined Christian sites in Nubia. As such may be described the granite capitals from Kasr Ibrîm, one of which is in the Cairo Museum, and one in the University Museum, Philadelphia, and the fragments of marble basins, etc., with Greek inscriptions, which may be seen at some of the sites. Also the large granite columns, the fragments of string courses and the red sandstone columns with Attic bases and podia worked in one piece which litter the ground close to the large fortress at Faras.

Up to the time of Justinian the Nubians had employed methods in building and design similar to those used in Egypt, but adapted and modified to suit their special conditions.

The Mohammedan invasion severed the connection between Nubia and Byzantium, and thus from the year 640 A. D. the traditions of building developed on independent lines.

Geology and Materials for Construction.

The geological condition of Lower Nubia was a strong factor in determining the type of structures, the soft sandstone of which the desert consists was easy to quarry and eminently suitable for coursed rubble walling; but it was the river mud deposit which played the most important part in the formation of the local building manner.

Geology and Materials for Construction

The latter material is most admirably suited for the manufacture of crude bricks, in the making of which sand and usually chopped straw were used. The mud was sufficient for mortar and when mixed with dung made good rough plastering.

The granite obtainable at the second cataract was but little used, the other materials being far easier to handle and sufficient for the needs of the builders.

As the district between the first two cataracts is almost rainless there was no reason to find other materials for roofing. Vaults of crude brick sufficed to keep out the weather and at the same time preserved an equable temperature inside the building, a matter of importance in a region where the variations of heat and cold are considerable.

Brickwork and Walls.

The Nubian church builder was consequently a brick craftsman and not a mason. In the greater number of buildings in which stone was used for walling, the treatment employed was the same as for brick; the stones were small in size, roughly shaped and laid in mud mortar, and there is no doubt that such walls were plastered with mud and generally whitened with lime-white. The bricks used for walls were usually larger than those in use in Europe at the present day, the most common size being about 0.20 m. by 0.10 m. by 0.30 m. The walls were not built with any very scientific bond and the bricks were often laid almost anyhow; but a very common arrangement in the cases of both single brick and double brick walls was to lay alternate courses of headers and stretchers and occasionally a course of headers on end. The same arrangement was also employed for walls exceeding 0.65 m. thick, the intervening space being filled with brick ends and sometimes chips of stone, though as a rule these thick walls were built entirely of stone.

The joints were wide, owing to the irregularity of the bricks. No mortar was laid in the vertical joints, but each course was grouted with rather wet mortar, a method which is employed in the district at the present day.

The Effect of the Climate upon Design.

The intensity of the sun dispenses with the need for large openings for light and the veriest slits are preferable in habitable rooms. In Nubia a large window has a double disadvantage as it not only permits direct sunlight to pour into the building, but also admits clouds of dust and sand whenever the breeze is strong. The Christians employed no protection against these two forces, for no evidence of either glazing or shutters has as yet been found.

The Brick Vaults.

The most characteristic feature of all Nubian buildings is the skew vault, which had been used by the Egyptians in tombs and minor buildings from the earliest times. The vault from its springings often rises considerably higher than the semi-circle struck on the span, the proportion of the rise to the span being on an average about 3 to 5. M. Choisy in "L'Art de Bâtir chez les Egyptiens" has advanced the theory that these vaults were set out by the aid of a simple device of cords to a true catenary form, but the results obtained by measurement from a large number of ancient and mediæval examples will not support such a theory, and the evidence is strongly in favour of the vaults having been set out by rule of thumb. The bricks used for vaulting vary but little from the ordinary walling bricks in size, but seem to be slightly harder, owing perhaps to the introduction of dung into the mud. A key was generally obtained by drawing three fingers across the wet brick on a curve so as to form a sort of 'frog.'

This system of vaulting was commonly used by the Byzantine builders. In Egypt and Nubia, both timberless countries, it was more economical than any other method, for no centring at all is required to support the rings of brick, each unit of which is maintained in position by the adhesive nature of the mortar and the friction consequent on the slope of the bricks, until the ring is complete.

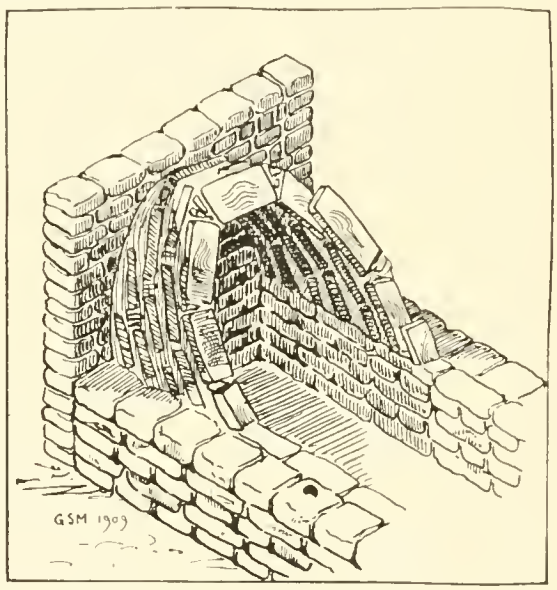
Modern Vaulting.

The writer recently had the opportunity of closely watching the means employed by the modern natives of Nubia when building a house for the expedition near Wady Halfa, in which, although the plan was designed to suit European requirements, native methods of construction were employed. The manner of building a vault proved exceptionally instructive, and the observations made during the progress of the work threw light on many minor problems connected with the ancient vaults.

Modern Vaulting.

The modern process of vaulting results in a replica of the ancient vault and hence a description of the procedure would not be out of place. When the side walls of the chamber have been built up to the springing level, one end wall is carried up to a height a little above the level necessary to cover the crown of the vault, and is often roughly shaped to the curve of the vault, if there is no second story. On the inner face of the wall the curve of the vault is drawn, either by a sharp implement or by means of a little mortar. No geometrical method is adopted, the actual line being dependent upon the eye of the draughtsman and his inherent knowledge of the possibilities of his material. A measuring rod is sometimes used to obtain symmetry in the curve. To do this rough setting out and during the actual construction of the vault the builder stands on a beam stretching across from wall to wall, so that the rise of the vault is governed by the height that a man can reach.

Two men are engaged in the actual vaulting and they each construct one half of each ring of bricks independently, meeting in the course of the work at the centre. Having satisfied themselves that the curve set out on the end wall is feasible, and that both sides of it from the centre are approximately equal, they lay a belt about 0.25 m. wide of the plastic mud mortar which is made up with cow dung, along this line. The first two springers of half a brick each are set at an angle of approximately 75 degrees to 80 degrees to the horizontal plane, sloping towards the end wall. These are then covered with mortar and whole bricks are laid against them, the tops of which touch the end wall. The process is carried on, each course starting alternately with a whole and a half brick so as to break joint, the inclined courses successively growing and following the outline traced on the wall, until at last a complete ring is formed. The inclined bed upon which each brick is thus laid together with the adhesive nature of the mortar overcome the natural tendency of the voussoirs to slip until the final brick is in place. The brick joints are wedged on the extrados with chips of stone or broken pottery to prevent the mortar squeezing out. As soon as two or three of these rings are completed, they are plastered inside and out and smoothed with the hand.



When the vault has reached the end of the chamber at the springing, there are still many courses to be added at the crown, and the problem of how to finish the end has been most ingeniously solved by the Nubians. The wall at this end is left built only to the height of the springing until the vault reaches this point, when it is raised a few courses sufficient to form abutment for another ring of the vault, which naturally does not spring from the former level of the side walls but takes off a little way up to the end wall, up which each succeeding course creeps. Thus the builders literally build the end wall under their feet as the vault rings require to be heightened.

There are two common features in the form of these mud brick vaults: the one is a curious ploughshare twist and the other a slight rise in the crown towards the end at which they were finished. Both of these are capable of very easy explanation. In the first case, as there is no centring employed and no measurements of any kind are taken after the first setting out, there is difficulty in maintaining the exact outline for each ring, and further, the fact that two men are employed in the actual building whose visual impressions of the original curve do not exactly coincide, tends to a variation in outline.

Modern Vaulting.

The tendency for the crown of the vaults to rise is curious, but is obviously explained by the fact that the underside of each brick at the crown is inclined at about 15 degrees to the horizon and that therefore in order to keep the soffit level the lower edge of the next course laid has to project below its adjacent edge—making the bearing surface less than the area of the brick. Fearful lest this should lead to catastrophe, the builders are apt to heighten the vault by a fraction of an inch at each successive course. As a natural result we find that the rise is greatest where the rings of bricks have the most slope.

Uses of the Vault.

The proficiency attained in the use of the skew vault by the Nubian builders led them to apply it to purposes for which it is not so well suited as it is for roofing. Thus we see it constantly used for the arcades separating the nave and aisles in churches, and for arches over doorways.

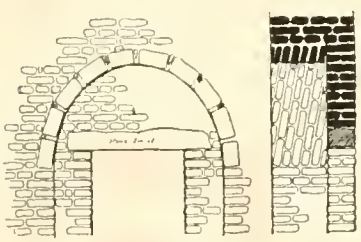
The scarcity of timber for forming centring undoubtedly accounts for this somewhat unnatural use, but it would appear that some wooden structure is essential to take the place of the end wall which, as has been described above, is found necessary to the construction of the vault.

In the case of the arcades, the rings of bricks are arranged sloping towards the aisle in all those cases noted in these pages, consequently a simple structure of planks roughly following the outline of the proposed arch and shored up from the aisle wall is all that would have been necessary to supply the abutment during the building of the rings.

The aisle vault in the larger churches springs immediately above the crown of the arcade and thus, perhaps accidentally, supplies a force to counteract the natural tendency of the skew arch to collapse under vertical loads.

The method which was employed in a very large number of cases for carrying a heavy wall over a doorway is worthy of special note. The opening was built with reveals, the wider span being covered by a skew arch. Across the smaller jambs a stone lintel was placed with a thin wall above it.

An examination of the vertical section through such a door discloses a device remarkable for its ingenuity in evading the need for any timber support. The jambs of the door having been built up to the springing level of the arch and of the lintel, which were not necessarily the same, the stone lintel over the narrower opening was put in position and a wall one brick thick, was built upon it to the height, and roughly to the shape, of the extrados or upper surface of the proposed arch. This wall formed the abutment against which the arch was to be built and the procedure then became the same as in the case of a vault. The deep reveal constituted half the thickness of the wall or more, and thus the arch, owing to the distribution of the load from brick to brick in the upper part of the wall, carried all the weight, and the lintel remained unloaded save for the small filling wall or tympanum.



Detail of Relieving Arch over Doorway.

From this review it will be evident that the development of architecture in Nubia was necessarily determined by certain definite local conditions. Chief amongst these were the exigencies of the climate and the nature of the material used in building. Thick walls and small openings were necessitated by the weakness of the mud brick, and they were also required to exclude the fierce rays of the sun and the sandstorms of the desert. The proportions of a building were limited by the capacities of crude brick, the dimensions of rooms and corridors were determined by the vaulting capacity of the skew arch or the dome constructed in that material.

The constructive problems, therefore, that Nubian builders were called upon to solve were to a great extent problems peculiar to the Nile Valley; but with the introduction of Christianity a form of edifice became necessary which should serve the purposes of Christian ritual. This general form was borrowed from countries already Christian, the prevalent Eastern conception

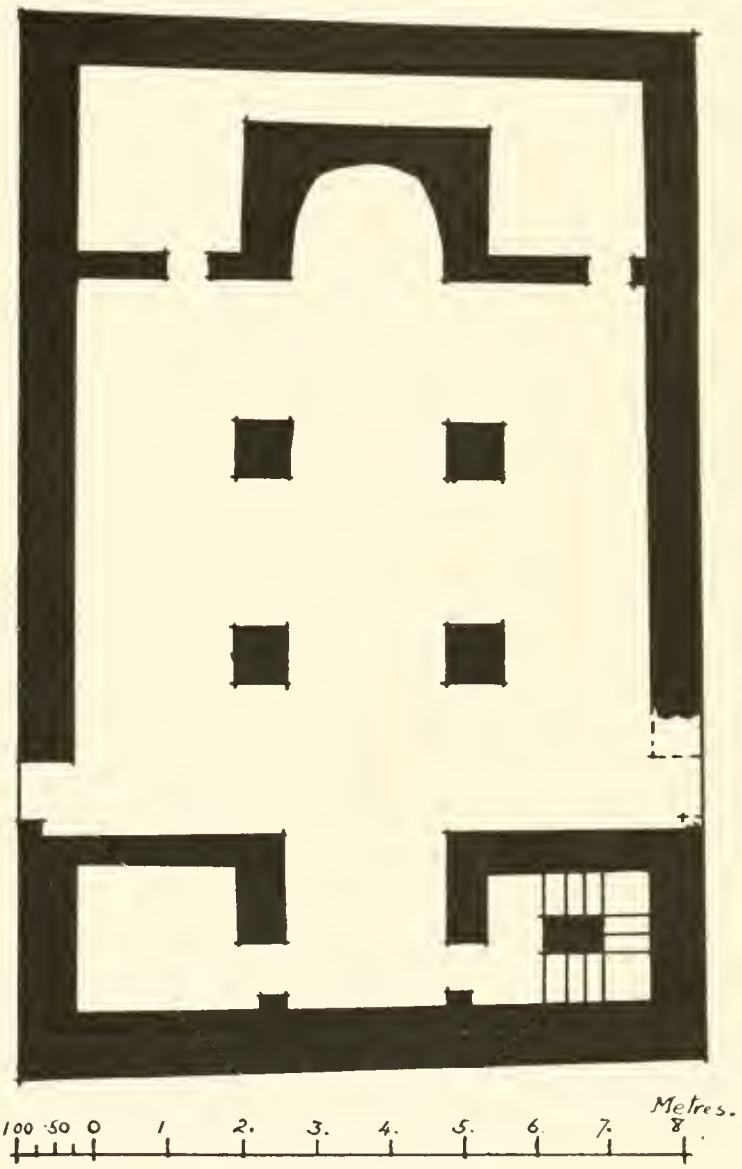
of a sanctuary secluded from the public gaze being maintained. From the general type, however, a distinctive species was produced in conformity with the needs and peculiarities of the country and the people.

The Nubian Church Type

The plan adopted appears, at first glance, to be of the type known as the "Basilica Plan," a misnomer given to the type of building most suited to congregational assemblies.

The adjective employed by the Byzantines for a long church with aisles and clerestory was "dromic," a term which is more fitting than "basilican," for there is but small connection between this type of building and Roman basilicas. Although there are no clerestories in the Nubian churches owing to the normal arrangement of the aisles in two stories the term "dromic" is well adapted to them.

The type of dromic plan adopted by the Nubians consisted of a nave and two aisles separated by piers and arches, and a sanctuary with an apsidal end.* Two small chambers, probably used as sacristies, were situated on either side of the sanctuary, and the latter was always separated from the body of the church by a wall with an arched opening or by an imposing arch resting on columns. The sanctuary thus seems to have been considered as a separate chamber, a treatment which suggests the prevalent Eastern idea of a holy place apart from the more or less public space in a building designed for purposes of religious ritual.



Plan of Church near Abu Simbel.

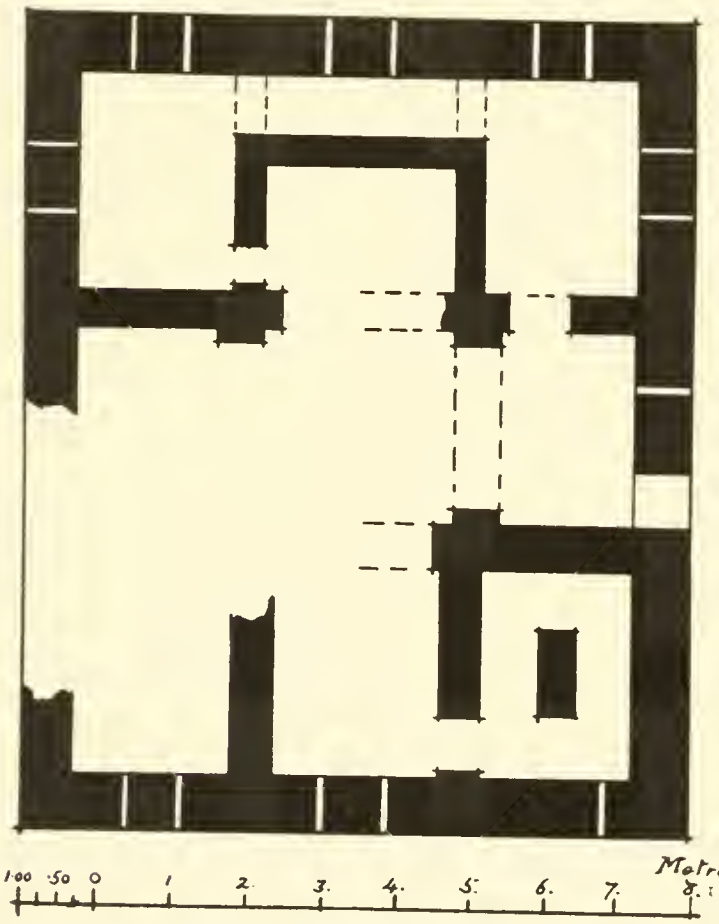
The entrance to a church was always effected from the north and south sides, the usual arrangement consisting of a door opening into each aisle, and in the case of the larger churches the doors were placed opposite the western bay of the nave arcade. There is no evidence of a western entrance in any of the churches. The doors themselves were small, owing to the limitations of material, but an architectural effect was

*Sometimes square on plan, but covered by an apse. The technical name for the sanctuary is Haikal.

sometimes attempted, usually by means of an external reveal which in some cases was further elaborated by stone pilaster strips.

Variations of Essential Plan.

These component parts of a church appear to have been essential. In the larger churches there is an addition of upper aisles or galleries, to which access is obtained by a staircase, generally placed at the west end of the south aisle, in an enclosed chamber. A room was built at the west end of the north aisle to balance the staircase, so making a symmetrical plan. The purpose for which this room was used is not clear, no objects having been found in any instance which will throw light upon the matter, but it may be conjectured that it was used as a sort of guest chamber or room for conversation and rest by those members of the congregation who had come from a distance. Further weight is given to this suggestion by the present use of such chambers for a similar purpose in the Cairene churches. Between this room and the staircase was a space which was entered from the nave by a wide arched opening, an arrangement very similar in appearance to the disposition common in those western European churches which have western towers and, like the latter, may have been used as a baptistry.



Plan of Church at Figiranton.

There are several churches with slight variations of the normal arrangement, as for instance those buildings in which domes were employed; a method of construction which necessitated a slight modification of the plan. The dome was in reality a mere incident in roofing in the majority of cases, no cruciform arrangement being attempted.

A small church which lies on the east bank of the river a few miles to the north of Abu Simbel was noted by Mr. P. Glendinning in the spring of 1910. His plan, which is here reproduced by his permission, shows a building of the usual type, but it has a point of interest in the roofing, for in place of the usual barrel vaults the church is covered entirely by domes or domical vaults. In this respect the building more nearly approaches the type found in the desert monasteries and the monasteries of the Natron Valley. The dome over the central bay of the nave is of elliptical form and is considerably higher than any of the others, but there are no openings in it for the admission of light.

A wide passage behind the Haikal connects the two sacristies, an arrangement which was employed also in the dromic church at Kasr Ibrîm, but not in the other churches of our district. Further South however this feature seems to be common. Thus Mr. J. W. Crowfoot, when he was acting as Director of Antiquities in the Sudan, noted a small church at Figiranton

about fifteen miles south of Wady Halfa, and his plan, which he has kindly granted permission to reproduce, shows a passage behind the Haikal. The plan, but for this one point, is very similar to the central domed church at Serreh which is shown on Pl. 30, Fig. *a*. *Variations of Essential Plan.*

The foregoing brief summary of the characteristics of the Nubian churches and their construction is sufficient to show that there is much in common in the examples quoted. Not only have the materials and the climate tended to bring about this uniformity, but the ritual must certainly have had a great influence in standardizing the arrangement.

CHAPTER III

THE CHURCH NEAR DEBÊREH

THE first church which was excavated and cleared for study stands on the left bank of the river opposite the centre of the modern village of Debêreh, some nine miles north of the railway terminus at Halfa. It has been chosen as the first example for description because the plan embodies all the features common to the larger churches in the district, and sufficient of the structure remains to show the original design of the building. From the photographs of the interior a good impression may be obtained of the general arrangement of all the dromic churches in Nubia.

The Site. The situation of the church is curious, for there are now no habitations near it, nor does it seem possible that the country for two miles in either direction along the river bank could ever have supported a community however small. But it is possible that the river may have shifted its course and come nearer to the site, sweeping away the foreshore of rich mud deposit and building up fresh land on the opposite bank. Such changes are of constant occurrence throughout the Nile Valley, and in greater or lesser degree occur with each annual flood, so that not infrequently what was last year a fertile bank will this year be a navigable channel.

The church stands just at the mouth of a slight depression which stretches back from the river through an extensive plateau of sandstone. The general level of the plateau is about twenty metres above the average high level of the river, and it is at this point over a mile wide from the bank to the rugged hills which skirt the great Western Desert. This plain is continuous throughout the district, diminishing to nothing at the second cataract on the south and at the hills of Wiss, between Faras and Abu Simbel, on the north.

The ruin is barely two hundred metres from the river and is built on the north side of the depression, which was doubtless the course of some stream, long since dry, caused by heavy rains in the hills. Between the church and the river the old watercourse splays out to a greater width, and on either side of it and near to the river there are some fallen crude brick structures—probably dwelling houses contemporary with the church. Close to these are two or three tamarisk clumps and mounds formed of sand and tamarisk peat.

To the north of the site in two or three clearly defined groups are numerous graves, and much scattered pottery of Christian date.

About a mile and a half down stream from the church, there is the ruin of a structure of contemporary or slightly earlier date, which is too dilapidated in condition for its use to be conjectured, though it may be noted that a staircase stands up prominently at the southwestern angle. The ruin is situated almost on the bank of the river, and is surrounded by an extensive group of tamarisk mounds.

Orientation of Church. The axis of the church was set out roughly at right angles to the line of the river bank, and the actual magnetic direction of the south arcade was 134° when the notes were made in February, 1908. As most of the churches seem to have been built with such rough and ready orientation, it is obvious that, owing to the winding of the foreshore, the axis is often far from being east and west; but for purposes of description it is sufficiently accurate to refer to the sanctuary as being at the east end of the building and to the other parts in accordance.

The church at present under consideration forms approximately a rectangle which measures

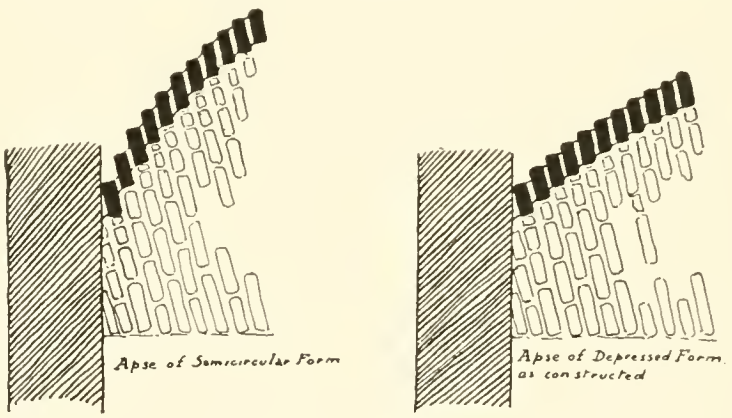
16.50 m. by 12.00 m. Its external walls are built of small blocks of sandstone in regular courses to a height of about 4.25 m. on the north and west sides and 2.75 on the east. The south wall is almost razed to the ground, but it must have been similar to that on the north side. Above the stonework, which was laid in mud mortar, the walls were carried up in crude brick, a slight external offset marking the change of material. *Orientation of Church.*

The only entrances to the church were the two small doors on the north and south sides which opened into the aisles opposite the western bay of the arcades.

A reference to the plan on Pl. 8 will give a clear idea of the arrangement of the church, and the curious contrivance by which the internal apse is obtained without excessive waste of material can be seen. *Composition.*

The church is composed of Haikal, Nave and Aisles, two sacristies, and the usual western bay to which reference has been made in Chapter II, which leads to the staircase at the southwest corner of the building and to the chamber at the northwest corner. The clearly defined side chapels, which are so common in the churches of Cairo and North Egypt, are entirely lacking.

The Haikal is about 3.75 m. wide and 4 m. in greatest length. The floor was the natural rock, but levelled and raised in places by a sort of concrete consisting of pebbles and mud. The apsidal end only approximates to the semi-circle and must have been set out almost entirely by eye. The walls of the Haikal, as in the other parts of the building, were carried up in coursed rubble and mud mortar for some considerable height. At 3.40 m. above the floor there is a course of header bricks laid projecting about a centimetre beyond the face of the wall and from this course the domical vault springs, which was started against the east wall with a ring of bricks consisting of five units rising about 0.50 m. and spanning about a metre. Each consecutive ring added during construction naturally had a wider span, and in consequence rose to a greater height, since the area to be vaulted was semi-circular, though in actual practice the ratio of span to rise was not kept constant and the vault was depressed; thus the height was prevented from becoming excessive at the start, and so the disaster which would naturally occur unless the lower end of the vault was heavily loaded was obviated. *The Sanctuary.*



Construction of Apse Vault.

Two narrow doors with arched heads lead into the sacristies, but that on the north side has been walled up to a height of 1.10 m., forming a sort of hatchway. Just to the west of these doors on either side an arched opening leads into the eastern end of the aisles.

A Tribune occupies the circular part of the Haikal to the east of the sacristy doors. This is built up in crude brick and plastered with mud, and it consists of five steps rising to 1.10 m. above the floor with a raised central seat 0.02 m. above the top step. Above the tribune are three niches, stone lintels forming the heads, arranged symmetrically, The use of these niches has been made clear, since in one of the churches at Faras (F. 2) a crude form of stand for a lamp made of mud was found in one of them and the lintel above was smoke blackened. It has been suggested that the three niches were symbolic of the Trinity, and the constant occurrence of the three is in favour of the theory. *The Tribune*

Eastern End. The photograph of the interior (Pl. 4, Fig. *b*) shows the arrangement of the east end very clearly, but might give the impression that an east window existed over the central niche. A careful examination proves that this was not the case, but that the lintel of the niche gave way or was removed, and in consequence the wall above it fell out. There is no evidence of an east window, or indeed of any direct light into any part of the nave or sanctuary in any of the churches studied, with the exception of those which have domes supported on drums.

Nave. The nave is about 8.25 m. long and 3.75 m. wide, but it is far from being rectangular for there is nearly half a metre variation between the two diagonals. The arcade walls separating the nave from the aisles are 1.10m. thick on the north side and 1.15m. on the south side, and the arched openings are considerably less in width than the piers; but the design, which appears at first sight to be excessively clumsy, is not altogether out of proportion to the necessity, for the weight of the superimposed walls and vaults is considerable and the materials are not suitable to economic construction. The piers, which measure roughly 1.10 m. by 1.35 m., are built of rough sandstone carefully coursed to a height of 1.80 m., and at this level the arches spring. The arches are built skew in the usual manner and rise to a height of 2.30 m. above the floor. At 2.85 m. above the floor the stone walling leaves off and above this point the walls are carried up in brick for six courses. A course of headers projecting about a centimetre, similar to that in the Haikal, accentuates the fact that the wall above oversails for the eight next courses in order to reduce the span of the main vault.

Piers and Walls.

The Nave Vault. Nothing is left of the nave vault but the indication of its springing, and that only for a short distance. Three openings on each side of the nave communicated with the upper stories over the aisles. These windows can have been little else than peep-holes and, in spite of the deeply splayed sills, very little view of the nave can have been obtained through them.

Arch of Triumph. The nave was separated from the Haikal by an arched wall which was further marked by columns set in reveals. This structure is generally called the Arch of Triumph, and is to be found in all the larger churches.

The columns to this arch were monoliths of red sandstone worked to a fine surface by hand, and the part towards the angle of the reveal was not finished to a fine surface. Parts of them were found in the church, but much has been destroyed; the largest piece, which is 1.75 m. long and 0.34 m. diameter, was found in the south aisle. The base upon which the column on the north side rested remains in position; it is worked only on the two sides showing, which are 0.37 m. wide and about 0.25 m. high. Above the square part a circular disc 0.35 m. diameter and 0.02 m. high is worked to receive the foot of the column. The capitals of these columns are both remaining, though one, which was to fit a column 0.25m. diameter at the necking, is in a very battered condition. The one illustrated (Pl. 6, Fig. *a*) is of good if rather simple design. The departure from the Classic design is very marked, for the treatment is more suggestive of Western Romanesque work than Byzantine. It is 0.31 m. in diameter at the necking, and about 0.45 m. in height.

Capitals.

The Screen Wall. Between the columns there was a low wall of crude brick 0.70 m. high with an opening 0.62 m. wide in the centre. This wall apparently formed the base for the screen, which must have stretched from column to column. The columns were too much damaged to ascertain the height of the screen, though on one of the pieces a sinking is evident in which a beam had rested.

Advantage was taken of the uneven surface of the rock to obtain a rise in floor level by a step 0.08 m. high, which was made up with brick and mud mortar, from the nave into the Haikal.

Pulpit. Placed against the eastern pier of the north arcade there is a small platform built of crude brick 0.78 m. high and about 0.90 m. square, and along the east side of it a low parapet wall runs with a short return on the south. This parapet is only two or three centimetres high, but it may have stood to a greater height or may have formed a seating for a wooden rail. The platform is approached by three brick steps on the western side, making four risers in all of about

0.20 m. each. This structure forms a sort of ambo or pulpit, but it looks like an inversion of the ordinary pulpit of European Christendom and is more like the mimbar used in Mohammedan mosques.

The Western Bay.

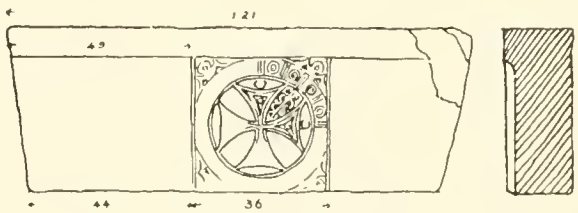
The western bay opening out of the nave is about 1.90 m. wide and 2.50 m. long. An arched doorway with reveals opens on to the staircase on the south and a similar doorway on the other side leads to the western chamber. The actual measurements of the latter are 0.82 m. wide, 1.80 m. floor to spring and 2.12 m. to the underside of the arch. There are three square-headed niches in this bay, each about 1.0 m. high and 1.10 m. from the ground, one in the centre of the west wall and one next to the door in each side wall. The actual springing of the vault to the bay is 2.25 m. above the floor and rises to a height of 3.15 m., but there are three oversailing courses below the springing. The west wall of the nave was carried across the bay directly on the vault, but owing to the large opening in the wall above very little weight was thrown on the vault, and further to relieve the crown a small relieving arch of seven bricks was built in the thickness of the wall under the window, thus distributing the load on to the haunches of the vault. A single window 0.58 m. wide and 2.60 m. above the floor occupied the upper part of the west wall of the bay over the niche, but it had been bricked up at an early date. This seems to have been the only means of admitting direct light into the body of the church.

The Aisles.

The south aisle is so ruinous in condition that little remains to be noted beyond the fact that its outer walls and general arrangement are the same as in the case of the north aisle, which is fairly intact. The total length of the north aisle is 8.70 m., and it is thus longer than the nave by the one bay which leads from the Haikal. The vault, which spans the width of about 1.70 m., springs 2.65 m. above the floor and rises to an average height of 3.48 m. A low brick wall 0.70 m. high cuts off the eastern part of the aisle, leaving a passage only 0.40 m. wide on the south side. This wall is in line with the main screen and suggests that the eastern part of the aisle was screened off as a side chapel, but the space so reserved is but 1.15 m. by 1.60 m. and in consequence would allow but little space for an altar.

Entrances.

The two entrances to the church are situated at the western ends of the aisles, close to the main west wall of the nave. Both of these doorways are broken down, but the northern is in the best state of preservation. It is 0.90 m. wide and has external reveals about 0.25 m. each way into which flat pilaster strips of finely dressed sandstone were set. These pilasters are 0.26 m. wide and 0.15 m. deep and were so set as to narrow the doorway to 0.75 m. wide. The stone lintel with an intricate cross design carved on it which was found lying across the sill, must have been supported on these pilasters. The dimensions of this stone are 1.21 m. by 0.42 m. by 0.18 m.



Lintel to North Door.

Sacristies.

The two sacristies are slightly different in actual arrangement, but are of about the same size. The northern measures 2.40 m. by 1.80 m. and the southern 2.40 m. by 1.90 m. on an average.

A door in each case leads from the aisle into the sacristy and there are also openings from the Haikal to which reference has already been made. The northern of these two doors from the sanctuary has been bricked up to a height of about 1.10 m. from the floor, leaving a sort of hatchway above. Inside this sacristy and against its south wall there is a curious arrangement of low brick and mud benches. The lowest of these is 0.06 m. high and the others rise 0.10 m. and 0.12 m. above it. A return bench against the west wall is 0.04 m. high. The bottom of the niche in the south wall is 1.0 m. above the floor and its height to the head, which is formed by a single slab of stone, is 1.10 m.

The vault over the sacristy, which was built leaning against the sanctuary wall, sprang from a height of 2.70 m. from the floor, and it rose to a total height of 3.65 m.

The South Sacristy. The south sacristy is similar to the former, but it lacks the benches. The niche which has a vaulted head is 1.55 m. high and is 1.0 m. above the floor. A low parapet wall at its edge is 0.16 wide and 0.04 high.

This is the only chamber on the ground floor of the church which has any direct light. Although the outer walls are destroyed to a greater extent than in the case of the north sacristy, there are the lower parts of two window openings still showing, one in the centre of each wall. The sill on the south side is 1.35 m. above the ground and the width of the window was 0.60 m. The sill of the east window is 1.15 m. above the floor, and the width was 0.57 m. The chamber was vaulted at 2.68 m. above the floor, and its roof rose to a total height of 3.62 m.

Northwest Chamber. The northwest chamber of the church is almost entirely plain. It measures about 2.0 m. by 3.20 m. Its floor is 0.06 m. above the level of the western bay, and a step about 0.15 m. above this level forms a wide sill. The springing line on the east wall at 2.30 m. above the floor is the only remains of the vault. In the west wall there are two niches, but the wall is broken down a little way above their sills, which are 1.15 m. above the floor.

Staircase. The staircase which balances the last mentioned chamber has been much destroyed. A single step 0.20 m. high leads up through a doorway into the stairway itself, which turns contrary to the sun round a central pier. The steps were built up solid for about the first metre of rise, and then were carried on raking vaults. Two narrow windows in the west wall lighted the lower part of the staircase. The central pier is standing almost the whole height of the building, but the steps have mostly disappeared; though enough remains to show that the ascent must have been very steep.

The Upper Story. The upper story seems to have been divided into separate chambers with communicating doors corresponding to the divisions of the lower floor. There was a gallery over the western bay with a wide opening into the upper part of the nave, which has been previously mentioned. The other walls separating the nave from the upper chambers were pierced by mere slits, three on either side, which had deeply splayed sills. Doors at the end of both aisles led into chambers over the sacristies, and from these were openings communicating with a passage which passed over the eastern part of the apse.

The vaults of the galleries followed on the lines of the lower vaults, but they had wider spans owing to the method of construction adopted in which the walls were narrowed down above the springing of the lower vaults by the width of the seating of the vaulting bricks. In the upper aisles the span was slightly reduced by three oversailing courses immediately below the springing level.

Very little headroom was allowed in the galleries, for the springing level averages about 4.80 m. above the general ground floor, and the first floor is 3.65 m. above, which only leaves a height of 1.15 m. from floor to springing, and the actual height of vertical wall, owing to the oversailing, is but 0.85 m. Allowing for the vault being of normal rise, the height at the centre would be about 2.25 m. at the centre of the vault.

The remains of the upper story are insufficient to show the methods of lighting throughout the gallery, but in the north wall of the church there are three windows about 0.60 m. wide opening into the upper north aisle and their sills are about 0.75 m. above the floor level. A similar treatment was probably employed on all sides of the building.

Date. Had it not been for the discovery of the stele, which is mentioned in the next paragraph, it would have been difficult to assign an exact date to this building, for as yet little is known of the Nubian Church, and the objects found are of little help owing to the fact that Coptic pottery has never been studied. Ancient Egyptian cemeteries are often dated on the evidence of a few sherds to within the limits of a dynasty or a reign, but archæologists in Egypt too often neglect

those places which are scattered with slip-ware painted with fish and crosses, and are content to assign them to a "Coptic Period," in which they refuse to be interested.

The Stele.

This stele was found lying face upwards in the centre of the Haikal. Its situation, as shown on the plan, suggests that, if that was the original position of the stone, it had actually formed part of the altar. But in such a position the inscription would not be legible, and it seems more reasonable to suppose that the stele was inserted in the front of the altar.

Mr. W. E. Crum has been kind enough to study a photograph of the stone and has made the transcription which, together with his translation, is published below. It will be seen that the date given is 745 "from the Martyrs,"* which corresponds with the year 1029 of our era. As it seems clear that the church had not been many generations in use, the date of its construction may confidently be assigned to the Tenth Century.

"Jesus Christ, Light of Life."

"Through the providence of God, the governor (δημουργός) of the whole (world), He that said unto Adam, the first man, 'Earth thou art, to earth again shalt thou return,'—even thus did the deceased (μακάριος) Peter the deacon go to rest, the (spiritual) son of Abba George, the bishop of Kourté,† on the seventh day of the month Epef (in the year reckoned.) from the Martyrs 745.‡ And (δέ) may God the good (ἀγαθός) and benevolent (*Lit.* man-loving) give rest (ἀνάπαυσις) unto his soul, in the heavenly kingdom, and place him in the bosom of Abraham and Isaac and Jacob, in the paradise of joy, whence weeping and grief and sighing do fly away; and may He cause the good archangel Michael to watch over his bones; and cause him to hear that blessed voice which shall say, 'Come, ye blessed of my father, and inherit the kingdom that hath been prepared for you since the foundation of the world.'

L. 20 (Greek). For thou art the rest (ἀνάπαυσις) and the resurrection (ἀνάστασις) of thy servant, Peter the deacon, and unto thee we send up praise, unto the Father and to the Son and to the Holy Spirit, now and for ever and unto the ages of ages. Amen." (One and a half lines of Coptic, illegible).

LIST OF OBJECTS FOUND IN THE CHURCH AT DEBÊREH.

Objects found in Church at Debêreh.

In the North Sacristy.

1. A flat pottery lamp 0.13 m. in diameter, on the bench by the door to the Haikal.
2. A fragment of pottery with a black design on red ground.
3. A fragment of blue glass.
4. A fragment of green glass.
5. Some shapeless fragments of jar sealings in clay; no marks.

In the Haikal.

6. Half a blue glass bead and a fragment of greenish blue glass near the south column to the Arch of Triumph.
7. A fragment of green glazed stoneware in front of tribune.
8. A circular pottery lamp 0.09 m. in diameter near the passage to South Aisle.
9. A short piece of a copper chain in the passage to North Aisle.

In the South Sacristy.

10. A shallow bowl of buff ware about 0.12 m. diameter, with an incised cross design inside at the centre, found in the doorway to Haikal.
11. A broken bowl of similar dimensions inverted over the former of buff ware with traces of a painted design in orange upon it.

*i.e., from the accession of Diocletian in 284 A.D.

†Kourté, presumably the Korteh south of Dakkeh, and not that above old Dongola, though both are far distant from Debêreh (*Cf. Rec. de Trav.*, xxi, 226). It is known as one of the Nubian episcopal sees.

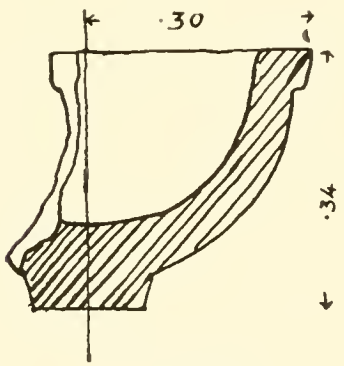
‡i.e., A.D. 1029. Written therefore twenty-four years before the similar stele published by Steindorff in Aeg. Zeitschr., XLIV, 71.

Objects found in Church at Debêreh.

12. A fragment of pottery with a painted design in red and purple.
13. A shallow bowl of orange ware with a black painted rim. In the centre of the inside was painted a black cross with equal arms.
14. A circular discoid jar sealing 0.14 m. diameter stamped in the centre with a square divided into four squares by cross lines.
15. A scrap of a leather book cover and fragments of parchment leaves in the niche.
16. A rough burnt clay box about 0.70 m., 0.35 m. wide and 0.30 m. deep with design of incised lines and applied bosses on the outside.

In the Nave.

17. Small fragment of green glass, probably part of a circular dish, near the south column to the Arch of Triumph.
18. Similar fragment behind the pulpit.
19. Two fragments of bluish green glass to the south of the pulpit.
20. Some fragments of a ferruginous sandstone bowl behind pulpit.

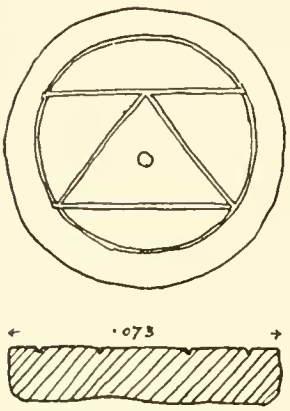


20. Sandstone Bowl.

21. Neck of a bottle of blue glass with a white ribbed design upon it under the western arch on the north side.
22. Fragment of a semi-opaque glass bottle.
23. Part of a large red sandstone bowl.

In the South Aisle.

24. A bowl of thick red hæmatite ware similar to modern ware. It is 0.19 m. in diameter 0.11 m. high and has a base ring.
25. A circular sandstone stamp 0.075 m. diameter and 0.015 m. thick.



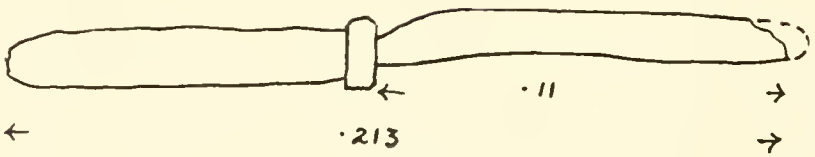
25. Sandstone Stamp.

In the North Aisle.

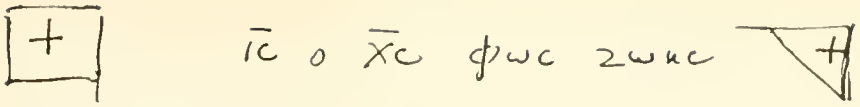
26. A fragment of orange faced pottery painted in black.

In the N. W. Chamber.

27. A bronze stylus 0.12 m. long.
28. Fragments of a bowl of buff ware painted in purple and red.
29. Part of a small lamp of red hæmatitic pottery.
30. An iron knife with a plain wooden handle fastened by an iron ferrule and one rivet.
31. Fragment of buff ware, orange slip, painted in purple.



30. Knife.



ⲓⲥ ⲟ ⲭⲥ ⲫⲱⲥ ⲍⲱⲏⲥ

† ⲍⲓⲧⲛ̄ⲧⲉⲡⲣⲟⲛⲓⲁ ⲙ̄ⲡⲛⲟⲩⲧⲉ ⲡⲁⲓ-
ⲙⲓⲟⲩⲣⲅⲟⲥ ⲙ̄ⲡⲧⲏⲣⲟ̄ ⲛⲉⲛⲧⲁⲩⲭⲟⲟⲥ
ⲛ̄ⲁⲁⲁⲙ ⲛⲓⲱⲟⲣⲡ̄ ⲛⲣⲱⲙⲉ ⲭⲉⲛⲧⲕⲟⲩ
ⲕⲁⲓ ⲉⲕⲛⲁⲕⲟⲧⲕ ⲟⲛ ⲉⲡⲕⲁⲓ ⲛ̄ⲧⲉⲓⲍⲉ ⲁⲅⲱⲧⲟⲛ
ⲙⲙⲟⲩ ⲛ̄ⲟⲩ ⲡⲙⲁⲕⲁⲣⲓⲟⲥ ⲡⲉⲧⲣⲟⲩ ⲡⲇⲓⲁⲕⲟⲛⲟⲥ
ⲫⲥ ⲁⲃⲃⲁ ⲅⲉⲱⲣⲅⲓⲟⲩ ⲡⲉⲡⲓⲥⲕⲟⲡⲟⲥ ⲛ̄ⲕⲟⲩⲣⲧⲉ ⲛ̄
ⲥⲟⲩ ⲥ̄ ⲙ̄ⲡⲉⲃⲟⲧ ⲉⲡⲓⲫ̄ ⲁⲡⲟ ⲙⲁⲣ̄ⲧ ⲫⲙ̄ⲉ ⲡⲛⲟⲩ
ⲧⲉ ⲇⲉ ⲡⲁⲅⲁⲑⲟⲥ ⲁⲩⲱ ⲡⲙⲁⲓⲣⲱⲙⲉ ⲉⲩⲉⲣ ⲱⲛⲁ
ⲡⲁⲩⲉ̈ⲓⲥ ⲛ̄ⲧⲉ̄ⲯⲩⲭⲏ ⲍⲛ̄ⲧⲙ̄ⲙⲁ̄ⲧ̄ⲣⲣⲟ ⲛ̄ⲙⲡⲛⲩⲉ·
ⲛ̄ⲉⲏⲛⲟⲩ ⲉⲕⲟⲩⲛ̄ⲉ ⲛ̄ⲁⲃⲣⲁⲁⲙ ⲙ̄ⲛ̄ⲓⲥⲁⲁⲕ
ⲙ̄ⲛ̄ⲓⲁⲕⲱⲃ ⲍⲛ̄ⲧⲡⲁⲣⲁⲇⲓⲥⲟⲥ ⲙ̄ⲡⲓⲟⲩⲛⲟⲩ ⲡⲙⲁ
ⲛ̄ⲧⲁⲩⲡⲱⲧ ⲛ̄ⲉⲓⲙⲉ̄ⲧ̄ⲉ ⲛ̄ⲟⲩⲛⲧⲉ ⲛ̄ⲟⲩ ⲡⲣⲓⲙⲉ ⲙ̄ⲛ̄ⲧⲗⲩⲡⲏ
ⲙ̄ⲛ̄ⲓⲁⲩⲁⲅⲅⲉⲗⲟⲥ ⲁⲩⲱ ⲛ̄ⲉⲓⲧⲣⲉⲡⲁⲣⲭⲁⲅⲅⲉⲗⲟⲥ
ⲛ̄ⲁⲅⲁⲑⲟⲥ ⲙⲓⲭⲁⲏⲗ ⲭⲁⲣⲉⲍ ⲛⲛⲉⲥⲕⲉⲉⲓⲥ
ⲁⲩⲱ ⲛ̄ⲉⲓⲧⲣⲉⲥⲥⲱⲧⲏⲙ ⲛ̄ⲧⲉⲥⲙⲏ ⲙ̄ⲙⲁⲕⲁⲣⲓⲁ ⲉⲧⲙ̄
ⲙⲁⲩ ⲛⲁⲓ ⲉⲧⲛⲁⲁⲃⲟⲟⲥ ⲭⲉⲁⲙⲙⲓⲧⲏⲛ ⲛⲉⲧⲥⲙⲁ-
ⲙⲁⲁⲧ ⲛ̄ⲧⲉⲡⲁⲥⲓⲱⲧ ⲛ̄ⲧⲉⲧⲛ̄ⲕⲗⲏⲣⲟⲛⲟ-
ⲙⲉⲓ ⲛ̄ⲧⲙ̄ⲛ̄ⲧⲣⲣⲟ ⲛ̄ⲧⲁⲩⲥⲃ̄ⲧⲱⲧⲥ ⲛⲙⲧⲛ̄ ⲭⲓⲙ[ⲏ]
ⲕⲁⲧⲁⲃⲟⲗⲏ ⲙ̄ⲡⲕⲟⲥⲙⲟⲥ· ⲥⲩ ⲅⲁⲣ ⲉⲓ ⲁⲛⲁ-
ⲡⲁⲩⲥⲓⲥ ⲕⲁⲓ ⲁⲛⲁⲥⲧⲁⲥⲓⲥ ⲧⲟⲛ ⲇⲟⲩ-
ⲗⲟⲛ ⲥⲟⲩ ⲡⲉⲧⲣⲟⲩ ⲇⲓⲁⲕⲟⲛⲟⲩ
ⲕⲁⲓ ⲥⲟⲓ ⲧⲏⲛ ⲇⲟⲝⲁⲛ ⲁⲛⲁⲡⲉⲙⲡⲱ-
ⲙⲉⲛ ⲧⲱ ⲡⲣⲉ̄ ⲕⲁⲓ ⲧⲱ ⲩ̄ⲱ̄ ⲕⲁⲓ ⲧⲟⲩ
ⲁⲅⲓⲱ ⲡⲛⲉ̄ ⲛⲩⲛ ⲫⲁⲉⲓⲥⲉⲓⲥ ⲧⲟⲩⲥ
ⲁⲓⲱⲛⲁⲥ ⲧⲱⲛ ⲁⲓⲱⲛⲱⲛ ⲁⲙⲏⲛ ⲡⲉⲛ....
ⲛⲧⲁⲩ....ⲛ ⲛ̄ ⲗⲉ ?

Stele from Debèreh (from photograph).
(Mr. Crum's copy.)

CHAPTER IV

FARAS

THERE is much to interest students of archæology in the large district of Faras. Monuments illustrating all periods of the history of Nubia are to be seen there, and remains of buildings of the Christian epoch are especially remarkable. In order to appreciate the relative importance of the various sites in the district a knowledge of the geographical features is necessary, so that a short description of the locality will not be out of place.

The District of Faras

The general trend of the river is in a northeasterly direction from the village of Aksheh, where there was until recently the ruin of an Eighteenth Dynasty temple, and it divides into two streams at the island of Faras which is called Artékio by the Nubians. The right of these two branches is unnavigable and the left is so thickly sown with treacherous rocks that during low Nile it becomes a rapid very difficult to navigate. After passing the island the river sweeps past the collection of villages situated on the left bank which form the Omdiah of Faras, narrowing down as it approaches the most northern of them. There an outcrop of sandstone rock, which forms a considerable hill on the right bank, restricts its channel. The cultivation of the village of Addendan, the most southerly district of Egypt, commences about 1500 metres from this outcrop, on the right bank, but the bank opposite is an uneven sandy waste as far as the ruined town of Wiss, about two and a half kilometres from the sandstone rock.

At Wiss the sandstone hills of the western desert approach the river almost to the water's edge and beyond this, the stream winds through a maze of sandbanks past Kelaa-t-Addeh to Abu Simbel, about twenty-four kilometres or fifteen miles distant from Faras.

The Nile mud deposit at Faras stretches back for a width of one and a half kilometres, a most unusual distance for Lower Nubia. On this wide cultivable plain there is an irregular range of sandhills which on the north and west sides shuts off the cultivated land from the desert. The sandhills, which at places attain a height of sixty metres, are largely formed of peat from tamarisk trees and the arraq plant.

A very deep hollow in the sandhills at one point has a bottom of damp mud and between the hills and the desert plateau the river deposit, which is covered with sand, lies considerably below the level of high Nile. The valley thus formed continues for some distance up and down stream, and is apparently the dry bed of a branch of the Nile which at some period diverged close to the island of Faras and rejoined the main stream near the ruined town of Wiss. Thus the land upon which the modern villages of Faras stand was an island, and judging from the disposition of the ruined buildings and cemeteries it is probable that the left branch of the river was in existence until comparatively modern times.

Disposition of Christian Antiquities.

On the sketch map (Pl. 10) may be seen the two churches marked F1 and F2 which are built upon the ledge of rock overlooking the valley and about one and a half kilometres from the present river bank. To the northeast of these lies a sort of tomb chapel and the whole neighbourhood is honeycombed with tombs, but the author was unable to find any traces of habitation. On the right bank of the river there are two churches, marked E1 and E2 on the map, with an extensive cemetery close to them, and here again no evidence of settlement could be seen. If the present cultivated part of Faras was an island, the distribution becomes perfectly intelligible. The habitations of the living were on the island, the cemeteries and churches on the mainland

on either side. It may well be that the churches were erected as tributes to some departed ecclesiastics, and the arrangement of tombs in the churches marked F1 and F2 would support this theory. *Disposition of Christian Antiquities.*

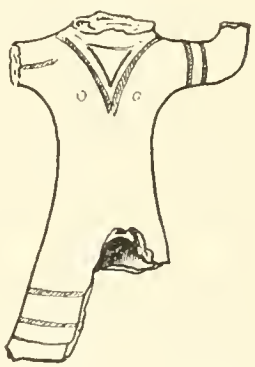
The desert beyond the valley stretches uninterrupted by hills for several miles inland, but at the lower end spurs from the high desert extend down to the river, and a narrow gorge has some grottoes cut into the west slope. Some of these grottoes were gallery tombs of the New Empire, and later they were turned into chapels and dwellings by some Christian community, for the walls are covered with inscriptions in Coptic. In one of the chambers the inscriptions are arranged in panels framed by red lines painted in the rock. Professor Mahaffy and Professor Sayce made copies of the texts in 1895. They consist of Apophthegmata, Esaias, the Exegete, etc., the opening lines of the Gospels and a list of martyrs.

The most striking of the antiquities at Faras is the large fortress which stands on the river bank (Pl. 11). A strong enclosure wall strengthened by external bastions enclosed an area of about 300 m. by 180 m., but much of it is now destroyed. The wall itself is built of ashlar to a height of 4 m. from its foundation, above which it was carried up in crude brick. Even at the present day it stands to a height of 10 m. at one part near the western angle on the landward side. On that side, the northwest, the length of the wall is 297 m. and its thickness 4 m. The four bastions are about 7 m. thick and project about 7 m. from the wall. (Pl. 11, Fig. *c*.) *The Fortress.*

At each end there are foundations of square external corner towers about 10 m. square built of sandstone, many of the blocks of which have been taken from a temple. In the centre of this side there stands the remains of a gatehouse with the customary side entrance, of which the lower part alone remains. The inner gateway is in a better state of preservation and shows an arched doorway on the outer face of the wall with imposts of the usual Egyptian cornice pattern; above the springing four stone voussoirs remain in position, and a wide fillet in very low relief is worked upon them to do duty as an architrave. On the third voussoir from the springing on either side of the doorway there is a representation in low flat relief of some animal, presumably a lion (Pl. 12, Fig. *b*). The inner face of the arch is plain. The passage within the arch through the thickness of the wall is slightly wider and was carried up to a greater height, but there is no evidence to show how it was roofed.

There are only a few fragments of the enclosure wall on the northeast side remaining, but the southwest wall can be traced to the river bank, where there is a part of an angle tower standing. In the centre of this wall stands a projection which may be a gatehouse similar to the one noted above. The wall along the river front, if there ever was one, has entirely disappeared.

Remains of a deep ditch are to be seen on the northwest side of the wall and about twenty metres from it. Excavation would probably reveal a continuation of the ditch on the other two sides of the enclosure, but there are now no traces of it visible on the surface. The sides, which are built up in crude brick and plastered with mud, are vertical from the bottom upward to a height of about two metres, the upper part sloping at an angle of about sixty degrees on either side. There seems to have been no flooring laid, or any foundations for the brick sides of the ditch.



Doll from the Ditch.

On the same side of the enclosure there are many small vaulted graves of late Christian date. They are situated round and over the ditch, being constructed in the actual fallen debris of the wall. Much damage has been done to this cemetery by the natives who have dug among the mass of brick work which has fallen over it from the wall in order to obtain sebakh with which to fertilize the fields. When digging to ascertain the depth of the ditch, a broken terra-cotta doll was

found which had evidently come from one of the adjacent graves. The doll, which is headless, measures 0.09 m. in height.

Date of Fortress. The existence of ruined temples of the New Empire and Græco-Roman periods shows that the site had been long and continuously inhabited. The fortress wall however is not Egyptian in character and must be dated to a period contemporary with the Roman Empire. Potsherds of Romano-Nubian type have been found bedded in the brickwork, a fact which proves that the construction is not earlier than the first century A. D. Again, that it cannot have been built late in the Coptic period is proved by the existence of the cemetery over the ditch which is of course part of the same scheme of fortification as the wall. The great wall may therefore reasonably be ascribed to the Blemyan period, and as a natural consequence the citadel also should be of that date. An examination of this latter structure shows that it was occupied in the Christian period, as indeed it is at the present day, but there is no evidence to show that it was not built in pre-Christian times. From its general appearance and structure the natural inclination would be to assign this building to the same date as the similar though smaller example, called Karanòg, near Anibeh (described in vol. 5 of this series).

Remains of Temples. A great part of the area enclosed by the fortress walls is strewn with fragments of fine masonry and sculpture. Many blocks also which are now incorporated in the citadel must have been taken from Egyptian temples of which the outlines are still partly visible amid the litter of stone and rubbish. Amongst the fragments lying on the ground were to be noticed cartouches of Thothmes III and of Rameses II. Some portions of a cornice were of Ptolemaic work similar to that which occurs in parts of Philae.

To actual Blemyan workmanship however must be attributed some fragments of a remarkable stone grille, the design of which is a tracery of conventional flower stalks bound by ligatures and culminating in lotus-blooms, the centre of the field being occupied by a lion. Fragments of similar patterns were found in the church F2, but their date is closely fixed by work of the same style discovered at Behen and at Karanòg.

The Citadel. The central feature of the fortress at Faras is most remarkable, and one is instinctively reminded by it of a Norman keep rising up from amidst its girdle walls. The portion of the building which is at present visible represents but a small part of the original structure, for the rubbish thrown out by successive occupants and the sand which has drifted around have smothered up the two lower floors.

The part of the structure which now shows above the rubbish is an irregular building about 55 m. long and 35 m. wide, but some parts of the lower story undoubtedly projected beyond the central block, for there are wide terraces of sand and rubbish on three sides of the building through which brickwork shows in patches. All of the original walls seem to have been built of crude brick, but perhaps excavation would show a base of ashlar walling as at Karanòg. Part of the upper story, which is now inhabited, has been extensively rebuilt, partly in brick and partly in stone, and there is a square tower or bastion on the northwest side which was carried up to some considerable height to serve as a watch-tower and used during the dervish raids into Lower Nubia as a signal station to warn the villagers of the approach of marauders.

There were probably four stories in the original building and they were all vaulted. The total height must have been over twenty metres.

The Chapels in the Citadel. In the upper story of the castle near the centre of the southeast side there is a small chamber which served as a chapel, for there are traces of painting on the walls and remains of a small apsidal vault over its eastern end. The paintings represent saints or apostles, but they have been too much obliterated for any clear impression to be obtained. Paintings of similar type on two adjacent walls on the north and east side of the building indicate the existence of another chapel. Very little of this room remains in its original condition, for the walls are mostly modern and have been roughly built up to serve as a sheep-pen.

About fifty metres to the northwest of the castle there stands a high mound of sand which has accumulated around a crude brick building. Only a few walls at the very top are left showing to indicate the type and date of the building, but these, although they give distinct evidence of Christian occupation, do not necessarily date the foundation to any particular period. The walls are of crude brick plastered with mud and whitened, and two of them have a finer plaster coat of gypsum and red sand with traces of painting. *Mounds near Citadel.*

A similar mound to the south of the castle contains a brick building of which the staircase stands prominently above the rubbish. There are two more mounds of sand to the north of the central building, but there are no actual walls showing to indicate their nature.

To the west of the castle is the temple site, now partly covered by the adjacent mounds, and to the south of this the ground is littered with sandstone and granite fragments of Christian date. There are large granite columns, podia, carved imposts and string courses. The general character of the remains is Byzantine and unlike the later developed style of Nubian church architecture. *Remains of Early Churches.*

Just within the southwest of the enclosure there are remains of a church of similar type, but of smaller size to judge by the relative dimensions of the columns. There is less rubbish at this site, so that the general outline of the church can be distinctly traced. Excavation would reveal the plan almost in its entirety.

Much pottery and traces of walling reveal the existence of settlement outside the fortress wall principally to the southwest of it. The accumulation of sand is so great that it is impossible to calculate the extent or character of these buildings.

About 330 m. to the west of the fortress an isolated sandstone rock stands prominently above the cultivation. This seems to have been an object of veneration alike to pagan and Christian, for there is a niche in memory of Setaw, Governor of Ethiopia under Rameses II, cut in the southwest side of it, while on the north and west of it there are Coptic tombs. Part of the eastern side of the rock has been artificially levelled and on this a church was built, a portion of the south wall of which was hewn out of the solid stone. (Pl. 12, Fig. *a*.) The outline of the building can be traced amid the dèbris, which has become a sort of hard mud paving now used for winnowing corn, but the exact disposition of its parts cannot be seen. The church seems to be of the usual dromic plan, but there were probably some additional chambers at the western end. A passage on the south of the church cut out of the rock was probably vaulted and over this passage access could be obtained between the upper part of the building and the top of the rock, up which a flight of roughly hewn steps leads from the north side. *Church on the Isolated Rock.*

One part of the church, the southern half of the apse, stands to some considerable height, and it forms a very striking departure from the normal arrangement. In all the churches seen by the writer in Lower Nubia the apse is internal and is not expressed in any way on the exterior, but in this one example the apse projected to the east beyond the rest of the church. Externally the projection was rectangular on plan and had niches on all three sides close to the angles. It is probable that this one exception to the rule was caused by some unusual circumstances, and one cannot but feel that it was designed in order to take advantage of a projection of the rock and thus obtain additional length to the nave, which otherwise would have been inconveniently short.

About 450 m. downstream and 30 m. from the river bank there are traces of numerous buildings, some of considerable size, half buried in the sandhills, and around them there is scattered much pottery of Christian date.

On the further side of the sandhills about 200 m. distant an extensive cemetery of Romano-Nubian date adjoins the modern Mohammedan burial ground. The ancient cemetery occupies several acres, and some of the tombs are of considerable size. A certain amount of this area has, at some time or other been put under cultivation but the eastern part of it has not been disturbed. *The Romano-Nubian Cemetery.*

In the earlier part of the chapter the churches F1 and F2 have been mentioned and they are fully described below in Chapters V and VI. About 350 m. to the northeast of F1 there is a small rectangular stone structure surrounding a shaft tomb, and about 600 m. due east from the church marked F1 there is a circular well shaft 1.20 m. in diameter built of rough sandstone blocks. A stone paved channel leads away from it in a northeasterly direction for about five metres.

Identification of Faras as Bawsaka.

In the introductory chapter the suggestion has been made that Faras is the site of the mediæval town of Bawsaka, but the evidence is purely circumstantial. The present Nubian name of the district is Kikilan or Kiklōs, of which the Arabic "Faras" is merely a translation, for the name means the "Mare."

The mediæval antiquities are so numerous and so imposing that the district must have been of first rate importance. But there is no mention by the Arab historians of any such names as are current at present in the neighbourhood, and therefore it is probable that one of the historical names which have not yet been allocated must be assigned to this site.

It is a quotation from Abu Selah given by Quatremère that suggests the identification of Bawsaka with Faras. The historian is enumerating some of the chief places in Nubia.* After stating that Begrash was a well-built and populous town he refers to a monastery situated at the foot of the second cataract dedicated to Safanouf, King of Nubia, and apparently also dedicated to SS. Michael and Kosma. The next reference is to a temple placed between two high mountains near the monastery of Daira and then there follows a more detailed note on this town called Bawsaka.

The most important points in the description are the mention of a number of churches and the statement that the residence of the Lord of the Mountain was in this town. There is no site in Lower Nubia which has so many ruined churches, for there are remains of seven large churches exposed to view and there may be yet others within the enclosure wall buried under the mounds of sand, as well as in the sandhills to the northeast of the fortress.

Besides the churches there are several small chapels: two within the castle itself are still visible and the grottoes in the rocky valley which lies to the northwest of the cultivation were used for purposes of Christian ritual. The castle would have been eminently suited for use as the residence of the governor of the province, and that it was inhabited during the later Christian period, although the old enclosure wall was ruined, is clearly indicated by the existence of the chapels in the upper story which have remains of paintings of distinctly late character upon the walls.

Various Arab writers have made references to the Castle of the Mountain and the Castle of the Lord of the Mountain, but there is no clear description of it, or note of its topographical position.

*See Chapter I, p. 5.

CHAPTER V

THE NORTHERN CHURCH AT FARAS

Excavations were begun at the end of February, 1909, on the two churches which lie inland from Faras, marked respectively F1 and F2 on the map. The northern of these two was the first to be cleared for study, and it was found to be very similar to the church near Debêreh which has already been described, but slightly larger.

The church, which measures about 19.30 m. by 12.25 m., stands at right angles to the edge of the rocky ledge which was formerly the bank of the river, and the magnetic direction of the south arcade was 135 degrees 30 minutes when the notes were taken.

Condition.

Very little of the structure was observable when the excavations were started, for the walls are not standing to so great a height as at Debêreh, and the drift from the desert behind the church had almost filled the interior with sand. Indeed the rubbish and sand lay to a depth of over three metres in many parts. The southern half of the church proved to be in the best state of preservation, for the northern arcade had collapsed and the piers stood only about a metre high. When the sand was removed the church proved to be slightly longer than the former one and more clumsy in proportion.

The Haikal and Tribune

The Haikal was first cleared and it was found to measure about 3.75 m. by 3.40 m.

A well-preserved tribune occupies the usual position. It is built of brick and plastered, and sufficient lime-white remained upon it to show that originally it had been entirely whitened. The steps rise in five equal tiers to a height of 1.10 m. and the central seat is emphasized by an additional height of 0.03 m.

Above the tribune are the three customary niches 0.50 m. wide and 1.0 m. high, placed 0.20 m. above the upper step. The centre niche is 0.40 m. deep, but the other two run further into the heavy masonry at the sides of the apse, viz., 0.76 m. on the north side and 0.65 m. on the south. All the niches have flat lintels of sandstone.

Arched openings on either side of the sanctuary communicate with the sacristies and aisles.

A small niche on the east side of the north pier of the Arch of Triumph had constantly contained a lamp, for the masonry below was almost saturated with oil which was still undried.

The floor of the Haikal appears to have been the solid rock, levelled perhaps by a layer of beaten mud. There is no evidence of a step between the nave and sanctuary, though there may have been one of beaten mud if the flooring of the Haikal was up above the level of the rock.

The Altar.

The position of the altar is clearly marked on the rock by mud mortar which had evidently formed part of the plastering of the brickwork of which the altar had been built. Traces of this mortar exist at the northwest angle of the structure and along the eastern side.

The Nave.

The nave is about 9.0 metres long and 4.0 m. wide and is nearly rectangular, for the difference between the diagonals is but 0.12 m.

The walls separating the nave from the aisles are 1.10 m. thick on the north side and 1.15 m. on the south. They can hardly be called arcades, for the arched openings, three in each case, are only about half as wide as the piers separating them. The openings are 1.45 m. wide and the piers 2.35 m. on an average. The piers are built of sandstone blocks laid in mud mortar, but the openings have a brick lining 0.30 m. thick carried up to take the skew arch. The arches in the south wall spring at an average level of 1.20 m. above the floor and rise to a height of 2.00 m.

The Nave. A course of headers was placed over the skew arch forming a true arch over it and above the crown the wall was carried up in brick. The level of the springing of the nave vault is not determinable as the original wall does not stand to any great height above the arches, though a part, which is comparatively modern, has been carried up in rough rubble for some considerable distance. This evidently formed the north wall of a dwelling made in the western part of the south aisle, the beaten mud floor of which was found over the fallen vault.

The Arch of Triumph. The wall of the Arch of Triumph is not standing to any great height and little of it remains but the reveals and the base of the north column. The latter consists of a square member 0.35 m. wide and 0.15 m. high and a drum above it 0.33 m. diameter and 0.30 m. high with a groove about 0.01 m. deep worked round it.

The Pulpit. The pulpit occupies the usual position against the eastern pier of the north arcade, but it projects almost half across the eastern arch. It consists of steps of five risers leading up to a small platform about 0.80 m. square, round the edges of which extended a low parapet 0.05 m. high and 0.10 m. wide. The total length of the pulpit is 1.90 m. and the height of the platform from the ground 1.05 m.

Bay and Aisles. The western bay opening out of the nave is 2.15 m. wide and 3.48 m. long. It has only one doorway opening out of it and this leads to the staircase. A single niche occupies the west wall and this is 0.45 m. wide by 1.0 m. high and is 1.12 m. from the ground.

The north aisle is 10.55 m. long and 2.00 m. wide.

The walls have been much ruined, but it corresponds to the south aisle in most of its features.

The south aisle is 10.80 m. long and 1.90 m. wide and the vault spanning it springs at a height of 2.50 m. from the floor and about 0.50 m. above the level of the intrados of the arches of the arcade.

There are three niches in the south wall; they are square headed and about 0.55 m. wide and 0.90 m. high and are about 1.00 m. from the ground. The heads are formed of slabs of carefully dressed sandstone about 0.10 m. thick. The north aisle is similar in arrangement but the walls and piers are much ruined.

Entrances. The outer doors occupy the usual positions. The southern one is 1.18 m. wide, and has reveals on the outer side. On either side of this entrance there are rough brick walls which had been altered and rebuilt in more recent years. These had in all likelihood formed a porch or entrance chamber of some sort. A more perfect example can be seen at the other church near by (see Pl. 17 and Chapter VI). Built into this wall on the west of the doorway is a large capital, but it is utterly defaced.

This porch and the western part of the south aisle had a floor of beaten mud above the fallen rubbish, and the ruined walls of the church had been roughly patched and heightened. At this floor level a quantity of date stones were found and a fragment of a wooden kohlpot painted with a black design on a yellow ground. These indications suggest that this part of the building had been used for dwelling purposes long after the church had been destroyed.

Of the north door the western jambs alone remain, for the western part of the outer wall of the aisle has disappeared.

The North Sacristy. The only entrance to the north sacristy is through the doorway from the Haikal. This doorway has a flat stone lintel 1.90 m. above the sill and over the reveal on the inner side there had been a skew arch. Across the springing of this arch a wooden beam had been laid, perhaps for the purpose of hanging a curtain.

The floor of the sacristy is some five centimetres below the level of the Haikal. A brick and mud bench 0.30 m. wide and 0.20 m. high which has a short return on either side is built against the east wall. On the south return of the bench there is a circular pottery jar 0.20 m. diameter sunk into the brickwork. There are two niches 0.90 m. high and 1.10 m. above the floor of the room which measures 2.06 m. from east to west and 2.43 m. from north to

south. The walls are broken down below the level of the vault for the most part, but the springing line can be distinguished at 2.75 m. above the floor on the west wall.

The South Sacristy.

The south sacristy measures 2.50 m. from north to south and 1.92 m. from east to west. It has two entrances, one from the Haikal, square headed, and one from the south aisle which has reveals and is treated with the usual lintel and arch. There is a recess in the south wall covered by a skew arch and a niche with a semi-circular head in the east wall. The vault springs at 2.70 m. from the floor on the east and west walls and rose originally to a height of about 3.50 m.

The north wall of the chamber is covered with inscriptions cut in the mud plaster but they are extremely difficult to read, as the white ants have almost honeycombed the plaster. The two most noticeable are ten lines over the door head and a lengthy inscription of about fifteen lines at a lower level commemorating visitors to the church. Mr. W. E. Crum studied the rough copies of this latter made by the author but was able to decipher little beyond the fact that it begins with the formula ANOK ΠΕΤΡ . . . and that the last three lines finish with the following words:

ΜΗΝΑ
ϪΕΝΟΥΘΟC ΧΑΡ ΜΑΝ
ΥΕ ΙCΟΥ ΜΟΝΑΧΩC ΒΦϘ3

Reference is here made to ϪΕΝΟΥΘΟC the archimandrite, the son (i. e. spiritual son) of ΙCΟΥ the monk, and a date follows which appears to read 597 of the Martyrs (881 A.D.). Mr. Crum was at first of the opinion that the famous archimandrite Shenoute of the White Monastery was intended, the writer being the spiritual son of the bishop Jesu, whose stele has recently been published, but he has pointed out that such a supposition is not in accordance with the date, which is some 200 years before the bishop's death.

Northwest Chamber.

A door at the west end of the north aisle leads into the customary northwest chamber, a room 2.75 m. from east to west and 3.00 m. from north to south, which has most irregular angles. There is a niche in each wall at 1.10 m. above the ground. The vault springs on the east and west walls at 2.35 m. above the floor.

Staircase.

The staircase is of about the same size as the latter chamber. The stair rises in the reverse direction to that which is customary and the steps are approached by a short passage. Under the staircase there is a small cupboard with a low doorway leading to it close to the entrance to the staircase.

The Tomb.

Whilst the exterior of the church was being cleared for measurement, the entrance to a tomb was found opposite the centre of the east end. The opening was covered by stone slabs and when these were removed a shaft 1.45 m. deep and 0.70 m. square was disclosed, cut through the rock. From this opening a semi-circular-headed tunnel, gradually diminishing in height and width, leads under the church for a distance of 1.70 m. The entrance to this gallery is marked by a flat fillet 0.07 m. wide in flat relief as an architrave, over which is a cross 0.23 m. high and 0.12 m. wide. The entrance to the tomb is shown on Pl. 13, Fig. *a*. Inside the tomb were the bones of five or six persons in confusion.

Date.

If the evidence of the date given in the inscription in the sacristy is correct, the church must have been built about 150 years before the stele was placed in the church at Debêreh and in that case the marked similarity of the two plans is worthy of note. There is no difference noticeable in the methods of construction employed, but the heaviness of the piers and the small area of the openings in the church at Faras certainly suggest an early date and imply that the builders were as yet uncertain in designing.

LIST OF OBJECTS FOUND IN THE CHURCH

In the Haikal.

1. Fragment of a bowl 0.09 m. high and 0.12 m. diameter. Red slip ware with painted design in black.
2. Two rough circular pottery lamps.
3. Portion of red pottery flat dish with turned up edge.

In the North Sacristy.

4. A small inscribed stele of sandstone. The inscription is almost obliterated.
5. A plain circular burnt clay lamp 0.11 m. diameter.
6. Several fragments of glass of a light green tint.
7. Several discoid jar sealings.
8. The stems of two cups of red slip ware, pebble polished, similar to that found in F2. (See p. 35 ; also Pl. 19, Fig. *a*.)
9. Part of a large burnt clay box with rough painted decoration in red ochre and yellow. (Cf. Debêreh, p. 20; see No. 11.)

In the Nave.

10. A roughly made sandstone pipe bowl, similar to the pipes in use at Malta.

In the Staircase Passage.

11. Part of a rough pottery box 0.35 m. high, 0.35 m. wide and about 0.50 m. long. It has a band of applied ornament near the top consisting of a semi-circular strip with incised cuts on it. Below this there is a trellis design painted in red ochre and yellow. (Cf. No. 9.)
12. A plain red slip bowl 0.205 m. in diameter and 0.08 m. high with base ring. (See Pl. 19, Fig. *b*.)
13. A buff slip bowl with a painted design inside in purple black, diameter 0.18 m., height 0.0575 m. Base ring. (See Pl. 19, Figs. *a* and *b*.)

These two bowls were placed one inside the other and inverted over about two dozen small spherical ferruginous sandstone nodules on the floor of the passage.

CHAPTER VI

THE SOUTHERN CHURCH AT FARAS (F2)

Position and Orientation.

The second of the churches excavated in this district lies to the southwest of the former and but 168 m. distant from it. The two buildings are not parallel, and the difference between the orientation of the naves is 8 degrees 30 minutes. In the present example the axis of the nave is 127 degrees 30 minutes (Mag.) whereas the centre line of the nave of the former church is 136 degrees (Mag.). Owing to the rhomboidal shape of the plan of this second church, however, the eastern walls are approximately parallel on the exterior.

The outline of the plan has features of mathematical interest. In spite of its unsymmetrical angles the opposite sides of the building are almost exactly equal, the dimensions being:—

Breadth of east end	12.80 m.
Breadth of west end	12.75 m.
Length of north side	22.95 m.
Length of south side	22.92 m.

These variations are extremely slight, especially when the nature of the material is taken into consideration; indeed the very roughness of such sandstone blocks as were used in the construction of this church may well account for an odd centimetre of difference.

Setting out of Plan.

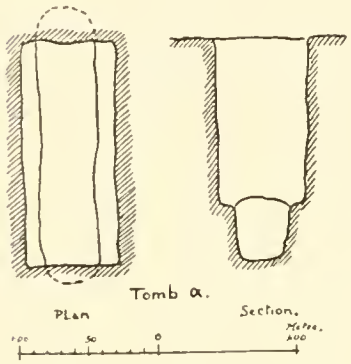
In view of such accuracy in the lineal measurements it is extremely surprising to notice the apparent carelessness with which the angles of the building were set out. The properties of a right angled triangle would appear to have been realized, in part at least, by builders of all nations from remote antiquity, but the Nubians seem to have ignored their practical application. A friend of the author, who has been engaged in the study of many mediæval buildings, suggested that the designers of this church were aware of the customary rule for setting out a right angle by means of a triangle whose sides are in the ratio of 3, 4, 5, but that they had forgotten the actual figures and used instead a triangle with sides in the ratio of 4, 5, 6, or some other miscalculation.

However this may be, it is a noticeable fact that if measurements be taken from one of the acute angles four units along one side and five along the other, the distance between the two points thus determined will be found to measure exactly 6 of the same units. It may be merely a coincidence that it should be so, and that other reasons may have determined the extraordinary skew of the plan, but there are no natural features in the ground which could influence the setting out.

Peculiarities of Plan.

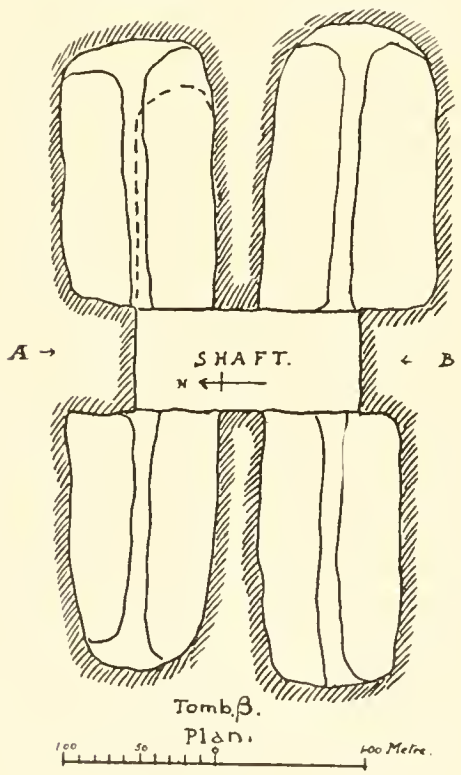
When the work of clearing was commenced the church was much encumbered by sand and rubbish, but it was noticeable from the start of the excavations that it possessed unusual features. Pl. 16, Fig. *a* shows the condition of the north side of the nave before the work was started. The sand lay on this side to a depth of less than a metre, but on the south side the sand and rubbish was piled up against the arcade wall to a height of over two metres and the south aisle was filled with rubbish to an equal height. The arrangement of the west end of the church was seen to be unusual and when it had been cleared the design was found to be more complex than in the former examples. Another unique feature of the plan is the staircase at the east end of the building in place of the customary sacristy chamber.

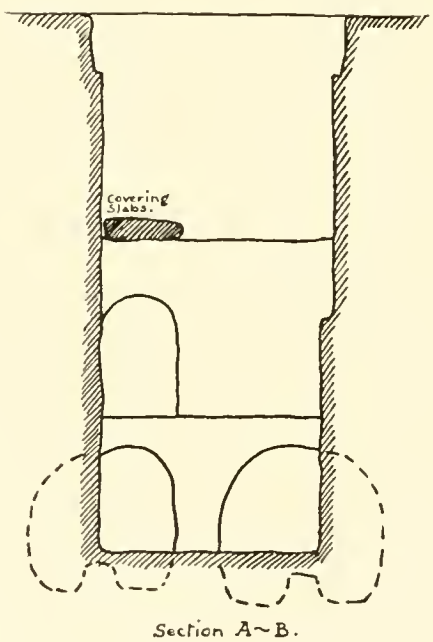
Tombs. In the eastern part of the church there are three shaft tombs and one shallow grave. The latter (α), which is in the north aisle, and the shaft (β) near it were opened, but owing to the fact that this work involved much labour and that no objects seem to have been buried in the tombs, further exploration of the shafts was not attempted.



The Haikal. The eastern part of the church was the first to be excavated, and it was soon apparent that the structure below the sand was in an excellent state of preservation. The tribune was found to be almost perfect and even the surface of lime-white remained over the greater part of it. The steps rise in three equal tiers to a height of 0.90 m., above which is a further step 0.20 m. high, and the central seat has an additional height of 0.15 m.

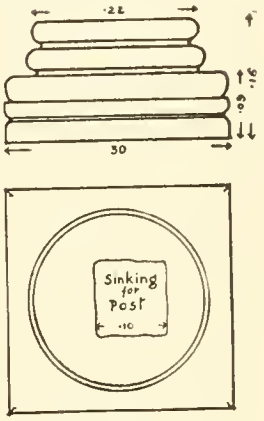
The greatest width of the Haikal is 4.38 m. and its length is about 3.70 m. The arrangement of openings to the aisles and sacristies is normal, but the door to the south sacristy has been bricked up flush. The three niches occupy their usual positions. In the southern of these there is a rough circular pedestal about 0.12 m. in diameter at the base built up of mud to a height of about





0.17 m. It had evidently been used as a support for a lamp from which the oil running down had reduced the mud to a consistency resembling rubber.

Against the northern pier of the Arch of Triumph there stands a base probably taken from some column. The circular member is 0.22 m. in upper diameter and the square member has sides of 0.30 m. In total height it is 0.16 m. Nearly in the centre of the upper surface there is a rebate or sinking 0.10 m. square which must have received the base of a timber post, for fragments of the wood still adhere. *The Haikal.*



Base from Haikal.

While the tribune was being cleared part of the broken sandstone slab of the altar was discovered resting upon a brick pier. As soon as the excavation had gone deeper the whole altar was disclosed with the exception of the remaining part of the stone slab. Soon after the rubbish had been taken away the brickwork showed a tendency to crumble under the weight of the stone, which was therefore removed. In the photograph of the interior looking east (Pl. 16, Fig. *b*) the stone is shown lying on the ground at the side of the altar. *The Altar.*

The altar was built of burnt bricks measuring 0.32 m. by 0.18 m. by 0.08 m. and each angle was strengthened by a square pilaster of fine sandstone 0.11 m. wide on each face. Its average dimensions are 0.90 m. from north to south, 0.75 m. from east to west and 0.90 m. in height. In the centre, under the stone top, there seems to have been a niche or recess, perhaps used as a reliquary. The brickwork showed traces of mud plaster and whitewash and upon the pilaster was noticeable whitewash and the remains of two vertical and two diagonal lines of red paint.

A sinking in the floor to the north of the altar and partly beneath it marks the position of a shaft tomb and there is also the beginning of another shaft in front of the altar which was not completed.

The nave is 11.85 m. long and 4.08 m. wide, and is separated from the aisles by arcades of five bays. The piers are 1.10 m. thick, and they are 1.60 m. wide. Although as usual the arched openings are less in width than the intervening piers the impression gained from a view of the arcades is one of lightness when compared with the former examples and of greater length, owing, no doubt, to the number and good proportion of the openings. *The Nave.*

The piers and walls are built of sandstone to a height of 3.10 m. from the floor, but the arches are of brick and are built skew. Above the stonework the walls are carried up in brick and after four vertical courses they oversail in the usual manner for an additional nine courses to the springing of the vault.

In the nave walls the usual openings from the upper aisles were formed, two of which can be seen on the north side. There were four of these on each side, those which at present exist are over the two western piers of the arcade, and there would naturally be similar openings over the other two piers.

Little remains of the Arch of Triumph except the lower part of the shafts set in the customary reveals. The shafts were of close-grained red sandstone 0.37 m. diameter, finely worked and finished on plain square bases 0.25 m. high. About 0.10 m. above the base there is a groove cut round the shaft. Part of the square base of each column has been cut out to receive a beam, evidently the sill piece for a screen. There is no defined step to the Haikal, but any change in level of the floor may have been made up in flooring against the sill. *The Arch of Triumph.*

The pulpit, which can be seen in the photograph *b*, on Pl. 16, has been badly damaged by falling masonry. It is 1.55 m. long and 0.60 m. wide, and consists of steps of four rises and a small platform 0.72 m. long. The total height to the latter is 0.60 m. *The Pulpit.*

The two aisles are similar in plan, but, as can be seen in the cross section on Pl. 18, the southern is in the better state of preservation, and from it alone can the construction be noted. *The Aisles.*

The Aisles. The total length of this aisle is 13.80 m. and its width is 2.05 m. Towards its eastern end a portion of the vault was found, springing at a level 3.15 m. above the ground, but shortly after the rubbish was removed the brickwork fell. In the south wall there are three niches each 0.60 m. wide, 1.00 m. high, 0.38 m. deep and 1.15 m. above the ground.

In line with the piers supporting the Arch of Triumph there is a crude brick screen wall, projecting from the outer wall of the south aisle for a distance of 1.20 m. with a return of the thickness of a brick towards the east, thus leaving a passage 0.80 m. wide against the pier. The screen is only 0.20 m. thick but is 1.30 m. high. On the top of the screen there are two small circular pedestals for such mud lamps as that which was found in the niche in the Haikal.

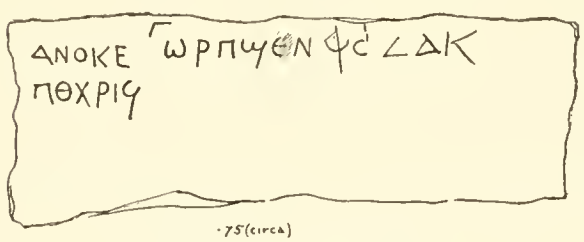
The South Sacristy. The door leading from the Haikal to the south sacristy has been bricked up by a thin wall and the only entrance to the chamber is from the aisle. The walls are much dilapidated, especially towards the southeast angle. In the north wall there is a niche 0.60 m. wide and 0.55 m. deep, and the bricked-up doorway to the Haikal forms another recess on that side. The floor had been made up in this space to a height of about 0.10 m. with mud, in which there is a circular depression which perhaps marks the position of the stand for a water-jar or filter. Against the south wall there is a bench 0.22 m. high, which returns along half the length of the east wall; and at the end of this return there stands part of a granite column bedded in the floor. The column has an average diameter of 0.22 m. and is 1.00 m. high.

Northeast Staircase. The position usually allotted to the north sacristy is occupied by a staircase which is entered from the Haikal. The steps originally led up on the right of the doorway, but a thin wall formed of stone slabs was afterwards constructed to close the lower end of the stairway, and the space above this was found to be filled with rubbish and broken pottery among which were many fragments of interest.

The Western Chambers. The plan of the western chambers shows a marked departure from the stereotyped arrangement. The bay opening from the nave is shallow and the staircase is placed behind it instead of at the end of the south aisle as in the other examples noted. An additional chamber is thus formed in the position usually occupied by the staircase.

The western bay itself is but 1.45 m. deep. The bench which is placed against its west and north walls is 0.38 m. high and is formed of finely dressed sandstone slabs resting upon a low brick and stone wall. There is a niche in the north wall which is 1.13 m. above the ground and its floor was covered with soft red tiles about 0.12 m square and 0.015 m. thick. A doorway on the south side of the bay leads to the passage communicating with the staircase and the room at the west end of the south aisle. Part of the space under the stairs has been screened off by stone slabs on edge, but there is a small opening close to the ground through this partition.

The chamber at the west end of the south aisle has no distinctive features beyond the three niches shown on the plan: two in the south wall and one in the east. The northwest chamber, which is entered from the north aisle, is similar, but possesses only the one niche in the south wall.



Inscription on Corner Stone.

Dating. There were but few objects found which would give any clue to the date of the building; indeed the only dateable material consists of a fragment of parchment and a few odd scraps found in the southwest chamber of the church. Mr. Crum states that these show remnants of Saïdic texts, written in good, small uncials, of about the sixth or seventh century.

At the northeast angle of the church there is a quoin close to the ground, which has the remains of a badly cut inscription upon its eastern face. This, which is reproduced above, is almost unreadable, and the little which can be deciphered is apparently meaningless.

LIST OF OBJECTS FOUND IN THE CHURCH AT FARAS (F2)

In the Southwest Chamber.

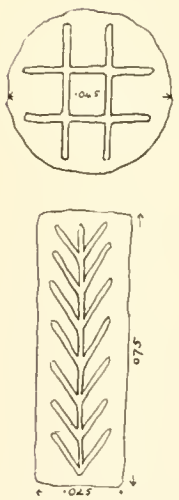
1. Some fragments of parchment manuscript.
2. Fragments of a rough baked clay jar with four mouths round the sides and a neck at the top.
3. Fragments of a baked clay grille.
4. Many chips and splinters of sandalwood

At the back of the Staircase.

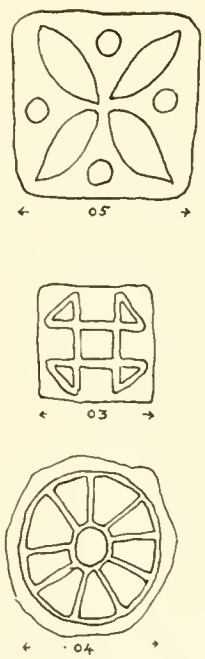
5. A small fragment of a carved stone grille with floral design of Romano-Nubian type.
6. Many fragments of sandalwood, some of which had formed part of turned balusters.

Under the Stairs.

7. A spherical quartz "rubber" or "pounder" about 0.05 m. in diameter.
8. Many clay jar sealings about ten of which were stamped, red ochre showing on the impression.



8. Clay Sealings.



35. Clay Sealings from S. E. Chamber.

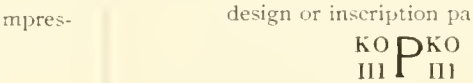
9. Part of a red slip ware bowl 0.20 m. diameter, 0.07 m. high, with a base ring 0.09 m. diameter.
10. Part of a flat baked clay dish about 0.36 m. diameter, with rough cross design on it made by three fingers across the wet clay.
11. Part of a large bowl 0.43 m. diameter, of black pottery with a moulded rim and incised design.
12. Many fragments of rough pottery and pieces of sandalwood.

In the Nave.

13. Two hand-made whitish slip bowls 0.14 m. in diameter and 0.05 m. deep, with designs painted on the interior in purple, black, orange and red, were found, one inside the other, inverted over about a dozen and a half of ironstone nodules, on the floor just at the re-entrant angle of the bench at the western end. (See Pl. 19, Fig. *d*.)

In the North Aisle.

14. A small shallow dish with base ring 0.10 m. diameter, of dark orange slip ware, with design or inscription painted in centre



In the Northwest Chamber.

15. A broken circular pottery lamp.
16. A fragment of a white glass vessel showing a base ring.
17. A small fragment of parchment manuscript.

In the Northeast Staircase.

18. A large jar, in many fragments, of light buff slip ware about 0.50 m high. It had a short neck and two handles and on the shoulders there was painted on the one side an eagle with displayed wings and on the other a complicated cross design.
19. A bowl 0.14 m. diameter, of hard black ware with base ring, a small five-leafed flower stamped in the centre inside.
20. Fourteen circular pottery lamps.
21. A red ware bowl 0.12 m. diameter, with base ring which had been used to contain oil.
22. The cover of a thurible of brass with circular pierced holes.
23. A small pottery oil vessel 0.06 m. diameter at base 0.05 m. high, with straight sides sloping outward to an upper diameter of 0.08 m.
24. Fragment of pale green glass; the handle of a cup or lamp.
25. Many fragments of rough pottery.

In the Southeast Chamber.

26. A cup or chalice on a stem 0.14 m. high, 0.10 m. greatest diameter. The pottery is fine and finished with a red slip pebble polished. (See Pl. 19, Fig. *a* and Chapter 9, p. 53.)

27. Fragment of the stem of a cup similar to the above.
28. Two cups of orange slip ware 0.10 m. diameter and 0.06 m. high. On one of them a few Greek characters have been roughly painted but they are undecipherable.
29. A circular pottery lamp with a handle.
30. Fragment of a cup of very fine ware with painted wavy design.
31. An ostrakon bearing the inscription
XΠΩ
CIOXC
MHNAI
32. Part of an iron hinge 0.13 m. long.
33. Part of a vessel in plain red ware of spherical form 0.23 m. diameter with a short neck 0.14 m. diameter.
34. Half of a shallow bowl 0.20 m. diameter, of plain red ware; no base ring.
35. A number of clay sealings some stamped; three designs.
36. A large ostrakon (c. 0.12 m. by 0.10 m.) of fifteen lines. (See below.)

Ostrakon found in the South Sacristy.

The Ostrakon found in the south sacristy seems to consist of incipits or first lines of Greek hymns or anthems, separated by // or \\. Unfortunately it has been rubbed by drifting sand and is quite illegible in the central portion. The following are the words which can be read:

οπρο αιωνων // . . . . . αγγελος // πα . . . .
δευτε λαοι υψ . . .
ασατε . . . .
μη . . . .
Line 5. εν ευεσημω η . . . .
ουνιμ δυναμ
φωνη σων ζητης
εξαντεει // φωνη . φ . . .
φυετα απο \\
Line 10. επεθυμης
κυκλωσαν
φως ημων \\
ενπολινο // εελ
ενοικω τοι \\
Line 15. εχωρησας // δυσωπησω . . . .

διαλογου

ρεσεν

Canon F. E. Brightman is of the opinion that this inscription is of the same nature as Crum's *Ostraka* 517, 518:—i. e., that it contains proper anthems for some festival, and he has kindly made the following notes:

Line 2. cf. Ps. xciv. (xcv). 1.

Δεῦτε ἀγαλλιασώμεθα τῷ κυρίω

Line 3. cf. Ps. xcv (xcvi).

Ἄσατε τῷ κυρίῳ ᾆσμα καινόν, ᾄσατε τῷ κυριῷ ἡ γῆ.

Line 5. This looks like Ps. lxxx (lxxxi).

[Σαλπισατε ἐν νεομηνίᾳ σάλπιγγι] ἐν εὐσήμῳ ἡ[μέρᾳ ἑόρτης ἡμῶν].

Line 6. It is difficult to see to what ρεσεν can belong except ἠρεσεν.

Line 7. ? σοων = Σιάν.

Line 8. ἐξαντλεῖ seems to be the only possible interpretation of εξαντεει.

Line 9. ? ῥύεται.

CHAPTER VII

THE TWO CHURCHES NEAR ADDENDAN

The Northern Church (E 1)

Condition of the Church.

THE northern of the two churches which lie on the east bank of the river opposite the village of Faras, was in an excellent state of preservation when it was visited in the spring of 1908. Unfortunately the turbulent weather of the following summer caused much destruction and when the building was revisited for the purpose of making a detailed study in March, 1909, its condition was much less perfect. The south column of the Arch of Triumph had fallen and was in fragments, nearly half of the remaining portion of the vault to the south sacristy had fallen and many minor portions of the structure had suffered from disintegration. The ruin was in a precarious condition and much of the upper part in imminent danger of falling.

Situation of the Church.

The position of the church is shown on the map of Faras (Pl. 10). It stands on a ledge of sandstone at the northern end of the rocky hill, locally called Gebel Sahaba, and some 150 m. from the water's edge. At this point has been fixed the boundary between Egypt and the Sudân, the actual line of which seems to have been arranged to cross the river from the north to the south in order to avoid dividing either of the villages of Faras and Addendan into two parts for purposes of administration.

Arrangement.

The general arrangement of the plan is normal, but the structure has several points of interest which will be described in detail. The church is one of the largest that we studied; it measures 22.80 m. long and 12.60 m. wide. The opposite sides are exactly parallel, but the angles are far from true right angles, though the outline of the plan does not deviate from the rectangular to so great an extent as that of the southern church on the opposite bank (F2). The photographs and drawings of the building afford a far better idea of the church than any written description, but there are some points which cannot be illustrated.

The Haikal.

The tribune occupies the greater part of the sanctuary with the result that the altar has been placed more to the west than is usual. It is doubtful if this was the original arrangement, for the doors to the sacristies are almost meaningless at the present time as they are blocked up for nearly half their height by the brickwork of the tribune. The altar, which was built of crude brick (not of burnt brick as in the other examples), stands between the piers of the Arch of Triumph. This position would not allow of a screen between the columns, yet that a screen existed at some period is almost certain, for there is a rough seating for a beam cut in each column a little below the necking.

The Arch of Triumph.

The columns are fine monoliths of sandstone 4.07 m. long. The base consists of a square member 0.50 m. high, above which there are four fillets separated by V-shaped mouldings worked round the column, all of which is worked on the one stone. Both the capitals from these columns are in the church, but one is very much battered. They are almost identical in design with that found in the church at Debêreh, but perhaps rather more crude in execution. (Pl. 26, Fig. *a*.)

The Nave.

The nave, which is separated from the aisles by arcades of four arches, is exceptionally long in proportion to its width. It is only 3.75 m. wide and it is 12.65 m. long, but yet in spite of this proportion there are only four arches in each arcade. The walls are of rubble to the level of one course above the brick arches; over which they are of brick treated in the usual manner with oversailing courses below the spring of the vault. There were four openings from the upper aisles on either side.

The Pulpit. The base of a pulpit of crude brick stands against the centre pier on the north side of the nave. This is an unusual position, as in the other examples the pulpit was always found against the pier nearest to the Arch of Triumph. The theory of a rearrangement of the fittings may well account for its situation. The enlargement of the tribune caused the altar to be built under the Arch of Triumph, thus necessitating the removal of the screen. If a screen was considered essential the obvious position would have been between the two next piers to the west of the original sanctuary and if it was fixed in that position the pulpit would naturally have been removed to its present site.

Sacristies. The two sacristies are very similar in proportion, but the southern is slightly larger than the other owing to the irregularity of the plan. There are no niches in either chamber, but in each there are two narrow windows placed high up in the outer walls. Besides the openings to the apse each sacristy has a door communicating with the aisle.

The Aisles. The outer wall of the north aisle has been destroyed for the greater part of its height, and there is nothing to show the disposition of the niches, but it was obviously similar to the south wall of the church. The south aisle is in a very perfect state of preservation as the photograph of the interior on Pl. 21 shows. The breadth is 2.14 m. and the length 14.45 m. The vault springs 2.60 m. above the ground and rises to a total height of 4.01 m. There are five large niches in the outer wall, and at a level 0.10 m. above the springing there are four windows about 0.20 m. wide and 0.70 m. high cut through the vault. These windows rake up through the wall so that on the outside they are at a level 0.55 m. higher than on the inside. Between each of these windows there is a niche or recess of similar dimensions on the outer face of the wall (see Pl. 21, Fig. *a*).

The Western Chambers. The western chambers of the church, which are badly damaged inside, possess no unusual features. The staircase is entered from the south side of the western bay and the steps lead up on the right in a contrary direction to the sun. The northwest chamber is entered from the north aisle and not from the western bay.

The Upper Story. There are but few indications of the arrangement of the upper story. The openings from the upper aisles through the nave wall have already been mentioned and besides these the only evidence is given by the outer wall of the south side of the church which has seven window openings.

To the east of the south door and about a metre from the south wall of the church there is the foundation of a crude brick wall setting off at right angles to the axis of the building. This was probably the east wall of a porch, similar to that which was found at the southern of the two churches at Faras (F2), but no further evidence of it could be discovered.

The Domed Church near Addendan (E 2)

Position of the Church. The smaller church on the east bank of the river in this district stands almost out of sight of the river behind the sandstone hill. It is a thousand metres distant from the former church and nine hundred metres from the river, and is surrounded by a bare plain of undulating sand with occasional outcrops of sandstone.

Condition of the Building. Parts of the structure are standing to a considerable height, but the interior has been very badly damaged and appears to have been intentionally wrecked. It was quite impossible to comprehend the plan of the church from those parts which were standing above the fallen brick and silted sand, and it was not until the upper level of the rubbish had been removed that the theory already advanced, of its having been a domed church, was confirmed. Large fragments of the crude brick dome were found just as they had fallen in the centre of the church, and the lower parts of the piers which had supported the central dome were seen underneath.

The Plan. The plan thus disclosed is quite exceptional. The nave had a central dome 2.00 m. in diameter, and a vaulted aisle 1.55 m. wide and 6.65 m. long was built on each side of it. Beyond the aisles

The Plan.

on either side there are two other long vaulted chambers, but these do not form part of the body of the church as they only communicate with it by a single small door in each case placed towards the western end and they were also thrown open to the air on the outer side by two wide arched openings.

The Haikal is 2.15 m. long and about 2.40 m. wide and is square ended though probably it had an apsidal vault over it carried on flagstones over the angles as in the case of the other small churches.

On either side of the Haikal there is a narrow sacristy divided by an arch into two parts and over the compartment furthest from the sanctuary there was built a dome supported on a high drum. At the western end of the church the disposition of the chambers was designed to balance the eastern end, for on the north side of the customary bay out of the nave there is a chamber similar in proportion to the sacristies and which also shows evidence of a dome over its northern half. The staircase which balances this room on plan must have been roofed in a similar manner though there is no trace of the dome or vault left as conclusive evidence. The existence of the staircase would imply that there had been an upper story, but it is difficult to explain exactly how much of the building was carried up. That there were no rooms over the outer aisles is evident from the fact that there was no sign that a vault at the upper level had scribed against the drums of the angle domes and that there was not sufficient debris to account for two vaults and the necessary walls. The section of the walls between the aisles is quite insufficient to carry a vault, for as may be seen on Pl. 28, the wall above the springing of the vault is but one brick thick. There are but two possible explanations of the staircase: either it led to a chamber over the western bay or else to a flat roof.

Paintings in the Haikal.

There are a few other points of interest in the church which are worth noting and first among these is the large fragment of a painting on plaster on the east wall of the Haikal. Several persons are represented, but unfortunately only the lower parts of the figures are left and the effect is that of a confusion of feet and the skirts of robes. It is probable that the painting portrayed a number of saints, for the costumes are of all types. Some show priestly robes with stoles of dark red, while one at least represents a soldier whose feet and legs are encased in armour. The limitation of time prevented a detailed study of this interesting relic, but it would undoubtedly repay any attention that might be devoted to it. Before the building was left a heap of rubbish was piled against the wall to guard the colours from exposure to the sun.

In the northeast corner of the Haikal there were thirteen jars of rough pottery, five of which were of barrel form and the remainder of the ordinary water-jar type with two ears. On the south side of the Haikal there is a screen wall projecting into the nave and returning towards the north.

The Flooring.

In the north sacristy a portion of the floor was paved with red burnt bricks measuring 0.24 m. by 0.11 m. by 0.035 m., laid in a herring-bone pattern, and a small fragment of similar paving was uncovered in the south aisle close to the door to the outer aisle. During the excavation a number of these bricks were found in the rubbish in the nave; a fact which suggests that the whole church had been paved in this manner.

Arches.

The true arch, which must have been turned upon centring, was largely used in this building, of which the most striking example now standing is the arch between the nave and the western bay which has a span of 2.42 m. The use of the true arch is so unusual that its employment would of itself mark a building as noteworthy, but in this example there are other features of special interest. The complication of the plan and the ambitiousness of the structure suggest a late development of the art, and in support of such a supposition we have the burnt brick paving and the technical skill displayed in the structure.

CHAPTER VIII

THE ANCIENT FORTRESS AND CHURCHES AT SERREH

Situation. The principal village of Serreh (Serreh el Gharb) is on the west bank of the Nile about fifteen miles north of Halfa, and adjoins the village of Aksheh. The east bank is almost destitute of vegetation, but there is a small amount of cultivation towards the northern part of the district and a fertile slope is usually available at low Nile.

On the east bank opposite the centre of Serreh el Gharb there is a ruined town enclosed by a crude brick wall standing close to the river's edge, and on a slight rocky eminence. Many of the houses are still comparatively intact, but most have crumbled and fallen, and the whole forms a jumbled mass of cavernous vaults huddled together in meaningless confusion. One of the most prominent features of the town is the small church which is near the centre of the ruins and has a diminutive dome standing well above the surrounding buildings.

The Ancient Fortress. A study of the wall revealed the fact that it was not similar in character to the other buildings on the site and that it had been ruined prior to the building of the Christian town. In parts where it had entirely fallen away it had been patched with work of different type and in other places the houses had been built partly over the wall. The photograph on Pl. 32 shows the type of work distinctly and also some of the later walling. In the spring of 1908 Mr. Alan Gardiner advanced a suggestion to the writer that the wall had originally been built as a fortress by Egyptians of the Middle or New Empire, and together we studied its structure.

The wall is about 80 m. long on the east side but there is a large gap in which it is entirely missing. At each end of this wall there are angle buttresses, and return walls run off towards the river for a distance of about 50 m. and there are indications that they were formerly continued for a further distance of about 60 m. to the water's edge (Pl. 30, Fig. *b*). In line with the south wall of the fort there is a piece of strong stone walling which was laid bare by the flood of 1909. This piece of masonry consists of a skin of ashlar, filled with rubble, about 10 m. wide on the river face and running back into the sloping bank. It seems to have been the base of a wall and probably marked the western limit of the south wall of the fortress. There is no evidence to prove the existence of a wall along the river bank, though one may have existed and in that case the ashlar pier would have formed a breakwater to prevent the stream from undermining the fortress wall.

The parts of the enclosure wall which are now standing are in a very dilapidated condition, and no detailed measurements of them can be taken until extensive clearing has been made. A thickness of nearly four metres still shows in places above the rubbish, but that this does not represent the original strength of the wall is evident from the battered and pitted condition of the surfaces. The ground on which the fortress was built is sloping and irregular, and the highest level of the ground is at the eastern side. A portion of both the north and south walls was built with the brick courses sloping to follow the fall in the ground. This is indicated on the plan by hatching at a different angle to the rest of the walling. The bricks were all laid as headers and large timbers running right through the thickness of the wall were used at intervals to prevent the wall bursting. The holes that these timbers occupied can be seen clearly, but very little of the wood remains owing to the ravages of the white ants. At every nine or ten courses in height mats of halfa grass were laid through the thickness of the wall, apparently for the purpose of

equalizing the pressure. The wide joints caused by these mats can be seen in the photograph (Pl. 32, Fig. *b*). *The Ancient Fortress.*

Round the eastern part of the fort, where the rock upon which it was built rises, there is a ditch with battering sides cut in the sandstone, which, of course, dies out as it returns along the north and south sides of the enclosure, as the rock falls away. The ditch is about 4 m. wide at the bottom and its greatest depth is about 3 m. From the north return of the ditch there are two branches, one running at an acute angle towards the wall and one leading away from the wall and rising in level until it dies away.

The whole fort is Egyptian in character and from the marked similarity of its brickwork to that of the great Twelfth Dynasty fortress at Mirgisseh it seems more than probable that it is of the same date.

The Christians utilized this ancient structure and repaired the wall where it was badly damaged. The small houses are built in a cluster without any apparent attempt at symmetrical arrangement and are principally grouped in the eastern part of the fortress, but some, probably of later date, have spread through a gap in the centre of the east wall and over to the line of the ditch. The photographs on Pl. 29 show the mass of buildings piled up in apparent confusion. The whole of the area is scattered with broken pottery, amongst which many fine painted fragments can be seen. *Christian Town.*

Besides the Central Church, two other little churches stand prominent. They are just outside the walls, one to the north and one to the south of the fortress. At the back of the southern of these two there are the remains of yet another church, but it is in a far more ruinous condition than are the others. Very little indeed can be seen of its general arrangement, but it is of about the same size as its neighbour.

The Central Church.

The little Central Church is peculiar, for, in spite of its small dimensions, it has almost all the component parts of the larger dromic type. It is only 6.30 m. wide and 9.10 m. along its longest side externally, and yet it consists of Haikal, two sacristies, nave, and aisles, and has a staircase leading to an upper story. The plan on Pl. 30 shows the arrangement. *The Plan.*

The Haikal, which is square ended, measures about 2.00 m. long and 1.33 m. wide. It is roofed with an apsidal vault and the curved end is carried over the angles on flagstones. A narrow door close against the sanctuary arch leads into the north sacristy. *The Haikal.*

The nave consists of two parts, of which the western is 2.45 m. long and has an average width of 1.35 m. This bay is vaulted in the usual manner. A wide arched opening communicates with the north aisle and a small door on the south side leads to the staircase. The eastern bay of the nave consists of a rectangle 1.75 m. long and about 1.65 m. wide. Arches on all four sides support walls which are carried up above the general level, culminating in a dome which is carried on roughly formed oversailing courses of pendentive form. *The Nave.*

The photographs on Pl. 31 show the construction of the church very clearly. The curiously misshapen arch leading from the domed space into the Haikal can be seen in the first photograph. The small square-headed aperture over the arch also opens into the Haikal. These two openings were the only means of obtaining natural light in the sanctuary, and this must have been very small in amount, for as can be seen from the photographs, the upper story obscured the direct light which at present pours through the openings at the base of the dome.

The two aisles are of different shape, owing to the lack of the customary arrangement of chambers at the west end of the church, and a portion of the south aisle has been cut off for the staircase. The south aisle is 1.60 m. wide and 2.70 m. long, and has an external door on the south side near its western end. A door 0.50 m. wide leads from this aisle into the south *The Aisles.*

sacristy, a low unlighted chamber 1.65 m. wide and 1.90 m. long. The north aisle is 1.70 m. wide and 4.85 m. long. The north entrance is situated a little to the west of the centre of this aisle.

The north sacristy, like that on the south, is absolutely unlighted. Its average dimensions are 1.75 m. wide and 2.10 m. long. There are two niches in it, one in the north wall and one in the west.

The Upper Story. The arrangement of the upper story is unusual, as the arrangement of the vaults does not coincide with that of the lower story. It can be seen in the photograph of the dome from the south that the chamber over the south aisle is vaulted across the wider span. A similar vault existed on the north side and the gallery over the north aisle was divided into two chambers. No further evidence is obtainable of the structure of the upper part without considerable study; but the author was prevented by circumstances from devoting more time to this building, though in regard to construction it certainly deserves more detailed consideration. The other two domed churches in the neighbourhood and the remains of a large dromic church, some 1,500 metres south from the fortress, have been thoroughly cleared and measured.

The North Domed Church.

Situation and Plan. The North Domed Church stands nearly 30 m. from the line of the fortress wall upon a bluff of rock and about 40 m. from the river. It is in a good state of preservation except that most of the vaults have fallen. This church is almost the same size as the little domed church in the centre of the town, but it is less complicated in plan and in section, for there is no upper story. The outside dimensions are about 8.30 m. long by 7.45 m. extreme width.

The Haikal and sacristies are separated from the rest of the church by a cross wall with but two openings in it, a small door between the south sacristy and the aisle, and a narrow arched opening between the nave and Haikal.

The Haikal. The Haikal is 1.70 m. wide and 2.10 m. long, and as in the former church is square-ended. It was covered by an apsidal vault which sprung at a height of 1.95 m. from the floor and rose to a total height inside of 3.05 m. Two narrow doorways 0.55 m. wide close against the division wall, one on either side of the sanctuary, lead into the sacristies.

Sacristies. The north sacristy is 1.80 m. wide and 2.15 m. long. The vault sprung at 2.00 m. from the ground and rose to 2.90 m. There are two niches in this chamber. The one in the north wall is 0.48 m. wide and 0.45 m. deep; it has a roughly arched head formed of three bricks making a total height of opening 0.67 m. The other niche, which is in the west wall of the chamber, is a small square-headed opening 0.35 m. wide and 0.27 m. high.

The south sacristy is similar to the other in dimensions and the vault springs at the same level. It is 1.90 m. wide and 2.10 m. long. There are no niches showing in this chamber, unless the sill in the east wall is the remains of one, for although it at present forms an opening through the wall, the thickness shown does not represent the original depth of the brickwork, as the outer face of the wall has perished. There is a table of solid brickwork built against the east wall of this sacristy. It is 0.40 m. wide, 0.63 m. long and 1.00 m. high.

The Nave. The nave, which is 5.05 m. long and has an average width of 1.65 m., consists of two bays. The real distinction between these bays is marked by the roofing. The western bay is vaulted at a mean springing level of 2.10 m. and the eastern part of the nave is carried up to a greater height, and was roofed by a small dome, 1.70 m. diameter, supported on a drum. Perhaps one of the most interesting features of the building is the ingenious method of relieving the nave vault from the weight of the brickwork forming the drum. A reference to the cross section on Pl. 35 shows this clearly. A rough relieving arch was built outside over the vault, but, lest this should not suffice, the builders arranged the height of the four windows in the drum so that the one over the

vault should cut down to the level of the voussoirs. The crown of the vault is thus unloaded. It is perhaps a theoretically doubtful construction to leave it so, as the haunches are somewhat heavily loaded, but this remains the best preserved part of the roofing. Above the level of the nave vault the drum is reduced from the square to the circular form by squinch arches. The opening between the nave and the Haikal has an irregular arched head and is of a peculiar shouldered form as the arch spreads wider than the vertical jambs. That opening is roughly walled up with stones and mud. *The Nave.*

The aisles are similar to each other in arrangement but are not of equal width. The north aisle has an average width of 1.55 m. while the south aisle is on an average 1.75 m. wide. In the north aisle there are two small windows but in the south aisle there is only one. The narrow communicating door 0.60 m. wide, between the south aisle and the sacristy, is against the south wall. *The Aisles.*

Under the north arch supporting the dome, there is a low brick platform 0.70 m. wide and 1.00 m. long placed against the sanctuary wall. From the proportion of the structure it is natural to assume that it indicates the position of a pulpit similar to those customary in the larger churches. *The Pulpit.*

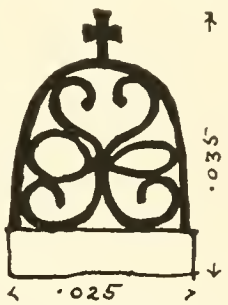
The church was constructed of crude brick throughout, and although it was plastered internally with a fine mixture of gypsum and crushed sandstone upon which traces of paintings show, externally it does not seem that the brickwork was plastered. Above the level of the window heads a horizontal band of bricks on edge was carried round the building and at the west end there are three or four more of these bands spaced four courses apart. The bricks average 0.39 m. by 0.19 m. by 0.075 m. *General Features.*

For purposes of comparison the plan and sections of this church have been placed on the plates with the plan and sections of the South Domed Church. It would be well before considering the other example, to emphasize one point which is common to the three domed churches at Serreh. They maintain the 'dromic' idea of all the Nubian churches. At first glance the plans of these buildings showing a central dome suggest a cruciform arrangement. The sections and construction show that no such idea was adopted, and it can clearly be seen that the domes merely form an incident in the roofing.

There was not a deep accumulation of rubbish in the church, thus it was improbable that many objects of interest should remain in the building. *Objects found.*

Only three objects of any sort were found:

1. In the north sacristy there was a small bronze ornament, perhaps the handle of a brush or similar article. It is 0.035 m. high and 0.025 m. wide. The design is best shown in the cut.



Bronze Ornament

2. In the sanctuary a fragment of an incised leather book cover was lying against the door to the north sacristy. Part of a single parchment leaf was attached upon which there are two or three Greek letters, but it is too much worm-eaten to distinguish whether the language is Coptic or Nubian.

3. In the south aisle a pair of plain iron tweezers and two plain iron pointed needles, all three on a small ring.

The South Domed Church.

This little building stands some seventeen metres to the south of the fortress and opposite the centre of the original wall. The site is very nearly level, but the steep slope of the river bank is only about fourteen metres in from the front of the church. *Situation.*

Condition. The outside dimensions of the church are slightly greater than in the former example, the length being 9.10 m. and the breadth 7.25 m. The general arrangement is like that of the former example, and there are only two minor points of difference; the sole access to the sacristies is through the Haikal, and the space under the domed bay is defined from the rest of the nave by an arch.

A large part of the walling at the southwest has entirely disappeared but the actual line of the brickwork can be traced. It is shown clearly in the photograph (Pl. 33, Fig. *c*) taken from outside, and from this view a good impression of the construction can be obtained.

The Haikal. The Haikal is square-ended and measures 1.60 m. wide and 2.10 m. long. Its south wall has completely disappeared and all the adjacent walls are endangered owing to the deep excavations made by the *sebakh* diggers inside the building. The customary apsidal vault springs at 1.60 m. above the floor level and rose to a height of 2.80 m. It was carried over the eastern angles of the chamber on sandstone flags and was plastered with a mixture of gypsum and crushed sandstone of a reddish hue on which traces of painting are visible.

Sacristies. A doorway 0.50 m. wide leads into the north sacristy, a rectangular chamber which measures 1.80 m. by 2.10 m. The vault springs at 2.60 m. and rises to 3.52 m. There are three small windows in this room, two in the north wall 0.65 m. high the heads placed close up to the spring of the vault, and one at the same level in the east wall. The inner sills of these windows are cut down lower than on the outside to form niches, and those to the north windows are made slightly wider than the window opening. There are two other niches with arched heads, one in the east and one in the north wall.

Of the south sacristy very little remains except the outer walls. There is a single window in each of these and the lower part of a niche shows in the east wall. The indications of the spring of the vault show that it was similar to the roof of the other sacristy.

The Nave. The total length of the nave is 5.60 m. and it is 1.60 m. wide. The eastern bay, over which the dome is built, is 1.90 m. long so that the actual dome is oval and not circular. The angles of the rectangle are gathered over by pendentives, but it could not be ascertained whether any attempt was made to build them carefully, for they are thickly coated with plaster and access is impossible.

The openings through the walls supporting the dome have semi-circular true arched heads. On the ground level these are four in number. The eastern one forms the entrance to the Haikal. On the other three sides there are lunettes cut through the walls just above the lower order of arches, which relieve the latter of much of the superincumbent weight.

This double arched construction is to be seen in the photograph of the church from the southwest (Pl. 33, Fig. *c*). The lunettes on the north and south sides of the dome do not open into the aisles but are walled up with a single thickness of brick. Above the crown of the vaults there is a window with an arched head in each face of the drum, which, unlike the former example, is carried up rectangular both inside and out to the springing of the dome.

The western part of the nave is covered by a vault which follows the line of the lunette in the eastern wall; it springs at a level 2.40 m. above the floor and rises to a height of 3.60 m. There is an opening with a semi-circular true arch 1.35 m. wide leading to the north aisle. The south wall of this part of the nave is entirely destroyed.

The Aisles. The north aisle is 1.58 m. wide and 5.55 m. long. It is covered by a vault similar to that over the western part of the nave. There are two narrow windows towards the eastern end of the aisle and one towards the west, which is bricked up on the inner face. High up in the west wall there are two others. All these windows have square heads formed of bricks on edge.

The north door is near the centre of the aisle. It is built with internal reveals but now shows an arched reveal in the head on the outside. The view of this doorway (Pl. 33, *a*) shows this curious arrangement and also the sunk Latin cross above the arch. A close examination of both

the cross and the arch showed that a filling of red burnt bricks had been used, but now only a few fragments adhere. There are many fragments of these bricks lying about. The lintels over the small windows are also of red brick. *The Aisles.*

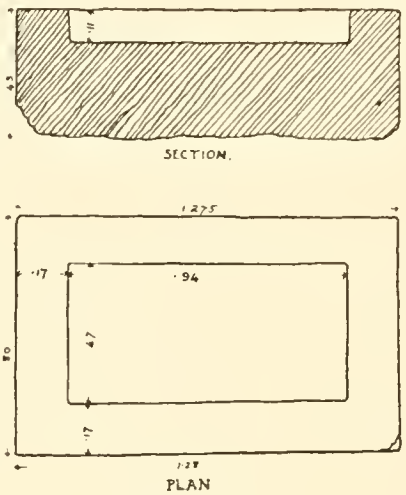
The south aisle was almost a replica of the north, but its outer wall is standing for only half its length. The two western windows are in existence and also one jamb of the south door.

There is no evidence of any means of access to the roof, which seems to have been made up to a level floor. In one place between the vaults to the nave and north aisle there is a "sleeper wall" of a triangular shape which, it is natural to suppose, served to stiffen the floor. (Pl. 33, Figs. *b* and *c*.)

There is a low brick platform at the north end of the west wall of the church; it is irregular in shape and is not level. The greatest height is four courses.

Just to the west of the north door a brick wall 0.42 m. thick and about 0.60 m. high at its present highest point, extends for a distance of 1.40 m. from the church.

No objects were found during the clearing, but there is a large block of red granite lying in the church which is of interest. It is 1.28 m. long, 0.80 m. wide and 0.43 m. high. On the upper face there is a rectangular sinking 0.94 m. long, 0.47 m. wide and 0.11 m. deep. The whole of the top and the sides are very finely worked, but the lower part of the stone is left rough.



Ancient Granite Block.

Granite Block.

The stone is now lying skewed across the arch leading to the sanctuary, obviously not in its original position for it is partly in the excavation made by the *sebakh* diggers. There is no mark to show for what purpose it was used, but it may have served as an altar in the church and it was probably taken from some ancient Egyptian building.

The Southern Church.

Some fifteen hundred metres south of the fortress there is a hummock of rock close to the water's edge and upon this a few fragments of walling mark the position of a church of the standard dromic type. The building has been very largely destroyed and the process of clearing was much impeded by the mass of fallen brickwork which had become almost as solid as concrete. *Situation and Condition*

A large part of the western end of the nave has been razed to the ground and the rock is denuded of all brickwork, but the eastern part of the building was piled high with rubbish. In view of these circumstances it was found to be impossible to make a complete plan of the church and impracticable to make an exhaustive excavation of the interior.

The plan (Pl. 36) shows the general arrangement, which is the same as the standard example at Debêreh. Unlike any of the other large churches, this one is built of brick throughout and no stone is used for walling.

The Haikal is 3.35 m. wide and 4.30 m. long. The apsidal end was set out carefully and forms a true semi-circle on plan. The lower parts of the usual three niches show in the wall, but there is no trace left of the tribune. *The Haikal.*

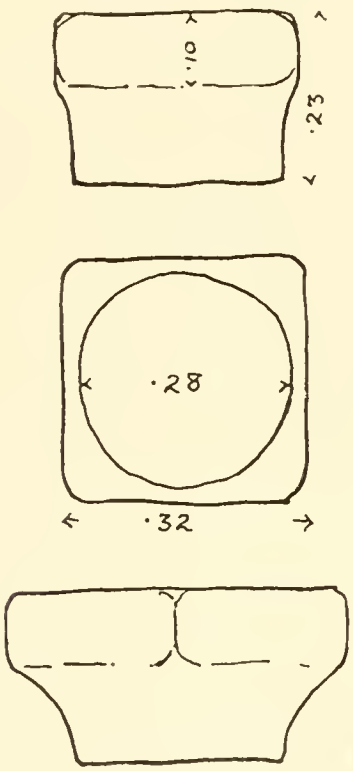
The base of the altar was found in the position shown on the plan. It is built of burnt bricks 0.30 m. by 0.18 m. by 0.075 m.

On either side of the sanctuary doorways lead into the sacristies. The northern of these two openings has been bricked up for part of its height as was the case at Debêreh. The floor of the Haikal appears to have been the solid rock, for it has been worked to a true surface.

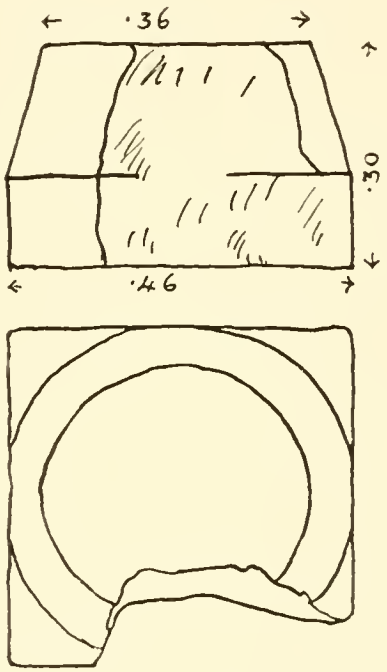
Sacristies. The north sacristy is 2.80 m. long from east to west and 2.60 m. wide. Besides the bricked opening communicating with the Haikal it has a narrow doorway 0.50 m. wide leading into the end of the north aisle. A rough capital of light red granite was lying on the floor of the room. Its upper part is 0.32 m. square, and below a vertical face 0.10 m. deep the stone is gathered to the circular form. The lower diameter is 0.28 m. and the total height of the stone is 0.23 m.

The south sacristy is very similar but is slightly smaller and lacks the wide recess in the west wall. It measures 2.76 m. east to west, and 2.45 m. north to south.

Arch of Triumph. Very little of the nave and arcades remains, but there is sufficient to show that the width between the arcades was about 3.60 m. and that there were five arches on either side. The Arch of Triumph was of the usual form with circular shafts set in reveals. The northern reveal has a base still in position, consisting of a square measuring 0.46 m. on its sides and 0.12 m.



Granite Capital.



Base of Column.

high, above which is a circular member of conical form 0.18 m. high and 0.36 m. in upper diameter. On the south side a large piece of the base has been roughly cut away, probably to receive the base of a post to a screen.

The other base was found near its original position and it is similar in form, but slightly larger. Its upper diameter is 0.42 m. and the square member has sides 0.50 m. long. The height is the same as the other example.

There were three fragments of the sandstone columns lying in the nave, of which the longest measures 1.75 m. It is of oval section 0.34 m. and 0.27 m. in diameter and has a V-shaped necking groove 0.02 m. wide worked round it about 0.16 m. from its broken end. One part of the column which came against the wall has been left in the rough. On the other side a rough groove extends the length of the shaft, apparently the housing for the screen. One of the other

fragments has exactly the same features but is 1.02 m. long and 0.33 m. and 0.32 m. in diameter. The third fragment shows both ends broken. It is 0.80 m. long and 0.36 m. at its greatest diameter. About the centre a very roughly scratched inscription is to be seen consisting of five or six characters with a horizontal contraction over and just below four characters which are probably ICOY. *Arch of Triumph.*

The pulpit occupies the usual position, and it is in fair preservation, though the upper part has been much battered. The three steps now standing represent a total height of 0.60 m., but it is probable that originally the platform was one step higher. *The Pulpit.*

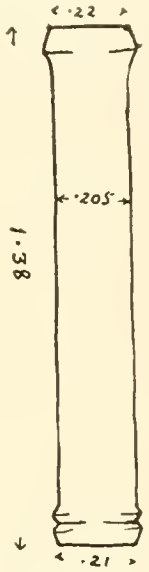
The north aisle is 2.00 m. wide and 15.45 m. long. The outer wall is missing for the greater part of its length, but it stands about 1.00 m. high at the eastern end. *Aisles and Doors.*

Near the pier of the Arch of Triumph is a low brick screen wall running out from the north wall and finishing in a short return eastwards. It leaves a passage 0.57 m. wide between the return and the pier.

The north doorway was discovered amid a heap of rubbish. It is 1.00 m. wide and has external reveals in which the stumps of sandstone pilasters were found. Owing to the fall in the ground there are two steps in place of the customary low stone sill.

A grey granite column was found among the rubbish about a metre and a half outside the door. It is 1.38 m. long and has an average diameter of 0.21 m.

The illustration shows its form, which is like that of the example found in the church at Faras, F2.



Granite Column from Doorway.

Of the south aisle very little remains but the south wall, in which there are six niches. The wall is not standing to any great height at any part of its length and towards the west at the jambs of the south door it has almost disappeared.

The arrangement of the south door appears to have been the same as the other, but the bare jambs alone are left.

The base of the staircase stands at the western end of the south aisle in the usual position. Only part of the west wall is in existence and there is but a bare indication of the chamber at the west end of the north aisle.

The extreme dimensions of the building are 22.50 m. long and 11.56 m. wide.

CHAPTER IX

THE CHURCH NEAR WADY HALFA

Situation. THE temples at the ancient Egyptian town of Behen, which stands on the west bank of the river about three miles south of the railway terminus of Halfa, are well known to all travellers who have visited the district. The town itself and the adjacent cemeteries cover a large area on the edge of the sandstone plain which skirts the river. A few hundred yards south of the girdle wall of the ancient fortress a mass of brickwork was noticed in the spring of 1909. As extensive excavations were in progress at the cemeteries and the town under the direction of Dr. Randall-MacIver, a gang of men was detailed to this site. The potsherds turned up at the start of the work were of Christian date, and it soon became evident that a church had stood at this point.

The Plan. The walls and piers that were first revealed were exceptionally confusing and the variety of floor levels tended to make the elucidation of the plan even yet more difficult. The first measurements which were taken showed no clear arrangement and a reference to the plan on Pl. 37 will give some idea of the difficulty of appreciating the meaning of the piers. At this period of the work only the outline of the unsymmetrical piers was visible and the two low walls marked F and G on the plan were still covered. The pier marked D was also still below the level of the excavations, but a continuation of the wall which lies to the east of it was standing, as shown by the dotted lines.

It was evident that this plan was a reconstruction of an earlier building and that the old piers and walls had been buttressed by additional brick walls (shown by black hatching and a black outline) while other piers had been added of rough stonework (shown by light hatching).

Position of Sanctuary of Late Period. The floor of this upper structure which fell sharply towards the east failed before the apse was reached and the walls, which in no places stood to any great height, were not above the floor level at this point. This fact confirmed the writer in the opinion that the sanctuary, at the time of the reconstruction, was moved further towards the west and that the site of the earlier apse was either unused or put to some other purpose.

The division between the Haikal and the nave of the latest structure is clearly marked by the low parapet marked E on plan, which rakes across from the pier C to the brick construction marked H. This latter does not seem to have been a structural pier and in all probability formed the pulpit. It has a small niche in its base opening towards the south. The wall which adjoins the pulpit on the east was standing to a greater height.

A square pier 1.60 m. to the east of the low screen wall marked the position of the altar. Part of a finely worked slab of sandstone which had probably formed the altar top was in the rubbish at the foot.

The Earlier Church. Slightly deeper excavation at this point brought to light another floor of beaten mud about 0.60 m. below the first level, and another low screen wall, marked F on plan, was disclosed beneath the later altar. When the remainder of the site was cleared to this level it was found that the additional piers of brick and stone did not continue to the floor and that only those brick piers and walls which are marked in black on the plan remained part of the structure.

It will be seen that the plan thus disclosed is more homogeneous, but even this must have been far from the original arrangement.

The Composition of the Church.

The keynote of the design is to be found in the relationship of the three L-shaped piers marked A, B and C. These must have formed three of four piers arranged in a square to carry a dome and thus we see an arrangement not unlike that in the domed church at Addendan. The other brick piers in the centre part of the building represent alterations carried out at some later date.

In other respects the general arrangement of the chambers is normal, but there are one or two points worthy of note.

The Haikal.

The apsidal end is of unusual form; it is slightly horse-shoed and is cut off flat on the east.

Of the tribune nothing remained but the facing to the west and the rubbish filling upon which the steps had been formed.

Sacristies.

The floor level of the north sacristy is considerably below the general level of the aisle owing to an increase in the slope of the ground and access to it is given by well-built stone steps, there being four risers in all. There is a low bench formed of mud along the south side of the chamber with a return along the west wall.

It is probable that some similar access existed to the south sacristy, but no trace now remains and the heavy west wall which divides the north sacristy from the aisle is not duplicated in the case of the southern chamber.

An Earlier Structure.

At this lower level of the church it was noted that there were further walls extending from the church on the northwest, the west and the south sides, and that the buildings on the south side extend for some twenty metres. Study of the adjacent walls showed that they ran under the church and formed a number of chambers which do not coincide with the upper structure. A portion of this lower building was cleared and sufficient indications were found to prove that it was of Christian date and the potsherds were not unlike those found in the church.

No further excavations were made owing to lack of time and it was useless under the circumstances to make any study of the lower building. Indeed it would be impossible without an expenditure of much labour and time. It is hoped to make a complete excavation of this site at a later date, but the church forms, for purposes of this publication, a separate entity.

It was extremely difficult to make sure to which period of the structure each object belonged which was found in the church, but every care was taken to ensure accuracy in this respect. The list of objects given at the end of the chapter is arranged as far as possible in three groups, i. e., those found in the two levels of the church and those found below the floor of the earlier church.

Painted Panel.

Some of the objects indicate the original foundation of the church to have been of early date and are therefore of peculiar interest. The small painting on wood which was found in the rubbish filling of the tribune is a specimen of great interest as it is of early type and probably dates from the seventh century. A careful copy of it, made by Mr. H. R. Mileham, is produced as a frontispiece to this volume. We are indebted to him also for the following notes on the subject:

"The fragmentary state of the painting leaves room for doubt whether the figure was represented as standing or seated. In the latter case the figure would have been of a tolerably elegant proportion, similar to that of the large painted figures in a fragmentary condition on the walls of the church at Addendan, and, like these, not distantly related to the figures in the sixth century mosaic ceiling of the Oratory of S. Maria in Cosmedin at Ravenna.

"On the other hand, it has been objected that the seated position is not commonly given to apostles in Byzantine art as it is to Christ or the Virgin, and it must be allowed that what in one case would stand for the line of the left knee, is much like the indication in Byzantine work of a hand veiled in the mantle holding a book, as in the case of the painted portrait of Pope Cornelius from the Catacomb on the Appian Way, as well as in some of the Ravenna figures: it must further

Painted Panel from Early Church.

be admitted that, in our example, indication of a left hand is wanting, where alternatively it might be expected, viz., on the extreme right of the panel overlapping the book. It is possible however that the subject may have carried over on to a neighbouring board. The fragment of a foot suggests a right foot where the left is expected; but that is probably due to careless draughtsmanship. Such folds of the drapery as remain do not imply that the legs were crossed, although this attitude does occur in certain late Roman work, notably in the seated figures of S. Peter and S. Paul on a gilded glass in the British Museum, which is probably of the fourth century. While the possible influence of Egyptian art which so constantly treated the seated figure need not be ignored and it may be remembered that the seats in the tribune of Coptic churches attest the orthodoxy of the seated posture in Church dignitaries; yet without corroboration by contemporary and kindred work it were rash to pronounce this as other than a standing figure, and impossible effectively to defend it from the charge of faulty proportion.

Restorations of Paintings.

"Unless it is an error of the draughtsman the right hand, through the absence of a thumb towards the left, is showing the palm in the act of blessing or expounding.

"As regards the workmanship of the panel. The paint is not applied over a gold ground, as is the case with much Byzantine work, but applied in body colour on a white priming of some thin plaster laid on the wood panel. The gold, which only occurs in the halo, seems to have been laid when the painting was complete except for the black line.

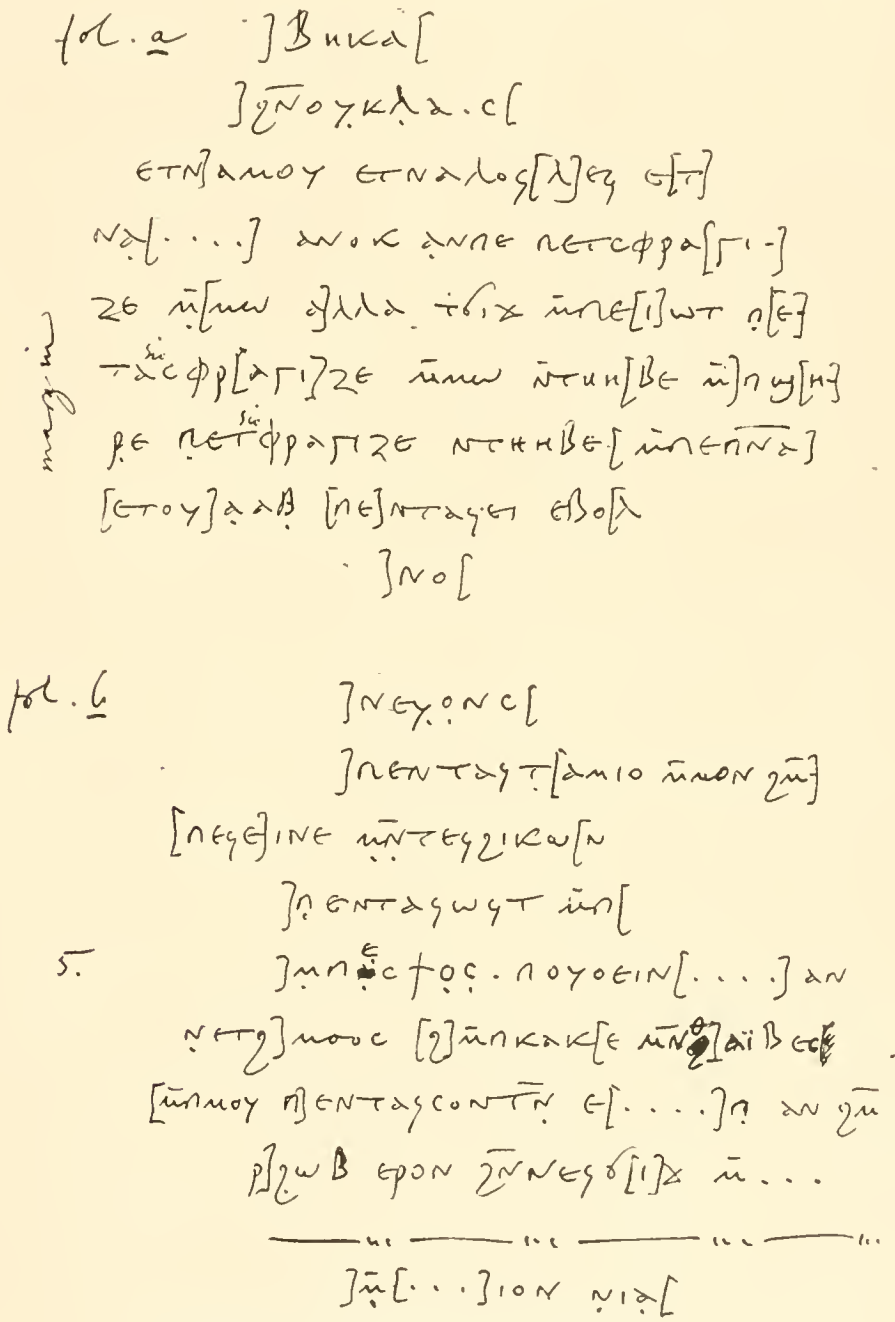
"The method of painting would appear to be first a coat of red to the background, or possibly to the whole surface of the panel. Certainly the red is apparent under the gold of the halo and appears at the shoulders inside the boundary line. A flat tint of red and white was applied to flesh parts, probably to the whole area of the head. The beard and hair were then picked out with touches of white as also the eyes and the bridge of the nose. The features and hair were then freely drawn in brown touches of somewhat transparent colour and the accent of the black line was added last and just subsequently to the gold. The drapery similarly seems to have been commenced by its half tone as a flat coat, the high lights being superimposed in thicker and whiter colour. A little of the brown line occurs on the drapery. The blue strokes are undoubtedly formed of a mixture of black and white. The drapery tint appears under the flesh colour in the fingers, from which the hand would seem to have been painted over the drapery. The white encircling the gold of the halo was laid in two or at the most three strokes and was of pure white.

"It is doubtful if there was any glazing with transparent colour; the richness of tone is probably due to the action of time. Most probably egg was the medium used with the colours. The pigment is of a very firm substance and together with the plaster ground (as seen in certain odd fragments) is about one-fortieth of an inch thick.

"The figure is doubtless intended to represent an apostle or evangelist. No Pallium is shown nor stole on the undergarment, though stoles appear on the Addendan fragments very similar to those on the Ravenna figures." This painting is now in the Museum at Khartum.

The scraps of parchment found in the north aisle form one fairly large fragment. Mr. Crum has studied this and has kindly added the following transcription and notes. *Parchment Manuscript from Early Church.*

Three pieces forming one fragment.



Parchment Fragments from Church at Halfa.

Parchment Manuscript from Early Church.

"It is impossible to say which side of this fragment is the *recto*, which the *verso*. The remnants of a title, at the foot of fol. *b*, might be either the heading or the final subscription of a text. It does not seem possible to read in this the word ἐναγγέλιον or καθολικόν, but one is tempted to complete the second word as Ἰάκωβος, translating 'of James.' What the bearing of such a title may have upon the text I leave others to judge.

"The intelligible phrases on fol. *a* are:—'....which shall die and shall wither and shall .... It is not I that do sign (σφραγίζειν) thee (*fem.*) but the hand of the Father that signeth thee (*fem.*). The fingers of the Son, it is, do sign thee; the fingers of the Holy Ghost, it is, do take away....'

"And on fol. *b*:—'.....that did create [man in His] image & likeness..... He that did affix the [nails?] the (?) cross ??).... the light .....them that sit in darkness and the shadow of Death. He that hath created us ..... fashioned us with His ..... hands.'

"It need scarcely be said that much even of the above is uncertain in reading and meaning. On fol. *a* a woman appears certainly to be addressed—which makes any relation, even homiletic, with a baptismal liturgy improbable. One might however suppose it a magical text, connected with some form of exorcism, applied to a woman. What remains on fol. *b* consists, on the other hand, of commonplaces such as might be met in countless homiletic or liturgical texts.

"The date of this MS. would be very difficult to fix; the limits of the eighth and twelfth centuries might perhaps suffice to include it."

OBJECTS FOUND IN UPPER LEVEL OF THE CHURCH.

In Sanctuary.

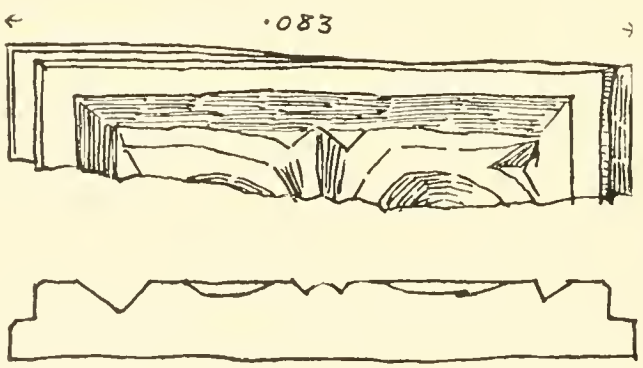
1. Fragment of white marble, with inscription in letters 0.02 m. high.

In North Aisle.

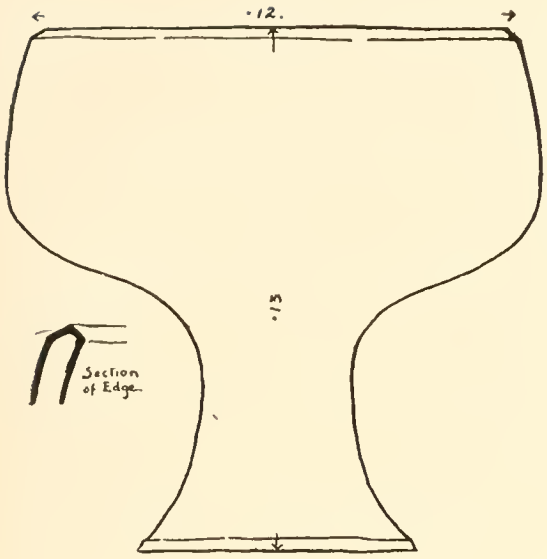
2. A small iron arrow head by the north door.
3. Several small fragments of bone cut to flat surfaces.

In Nave.

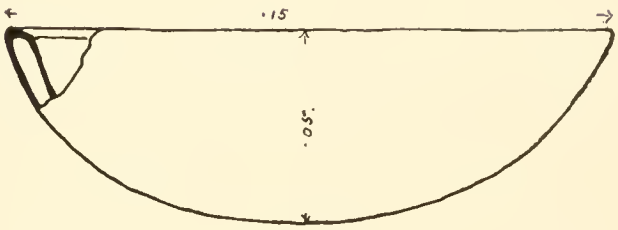
4. A fragment of carved ivory.
5. Many fragments of mud plastering with a whitewash surface upon which an inscription had been painted in Coptic characters with some black pigment. The average height of letters is 0.01 m. high.
6. Close to the pier marked C there were found the fragments of a cup or chalice of fine red hæmatitic ware, not unlike the one found at Faras (see Chapter VI, p. 35, and Pl. 19*a*). At the rim there is a narrow band of purple black both inside and out, and a similar line of pigment was applied to the base. The total height of the cup is 0.13 m., the upper diameter 0.12 m., and the diameter at the base 0.07 m.



4. Ivory Carving.


 ·12·
·13
Section of Edge

6. Chalice.


 ·15
·05

7. Bowl.

7. A broken flat bowl or dish of the same ware as the cup was found with it. Its diameter is 0.15 m., and its total height 0.0475 m.

In South Aisle.

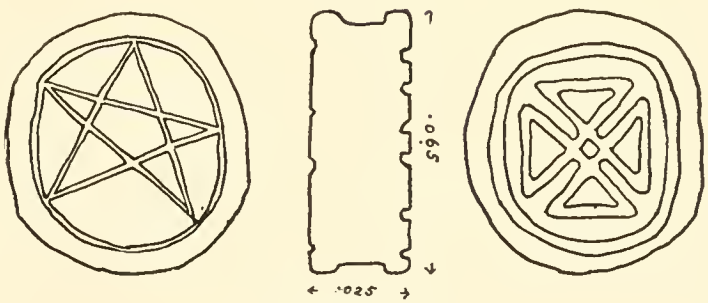
8. A plain flat bowl 0.115 m. diameter with straight sloping sides, which had been used for oil.

9. A sherd of yellow slip ware with a design of a brown wavy line between two straight lines and a red dot at each bend.

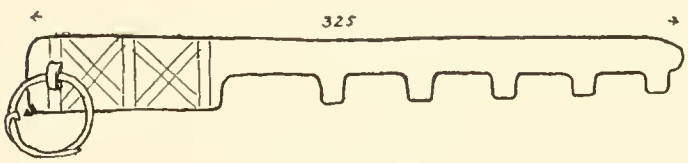
In the Northwest Chamber.

10. A double circular stone stamp 0.065 m. in diameter and 0.025 m. thick.

11. A flat iron key for a lock of Roman pattern with a loose ring on the handle. Its total length is 0.325 m.


 ·065
·025

10. Stone Stamp.


 325

11. Flat Roman Key.

OBJECTS FOUND IN LOWER LEVEL OF THE CHURCH.

In Sanctuary.

The following objects were found in the rubbish of which the body of the tribune was formed:

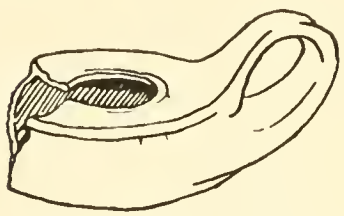
12. The small painting on wood 0.117 m. high and 0.039 m. wide (see frontispiece and page 49 sup.). This may have been an ikon, or perhaps formed part of a panel in a screen.

13. Five small iron crosses. The cross pieces are fixed by single rivets and the uprights are turned over to form a hook (see Pl. 38, Fig. *b*).

The dimensions of the crosses are:

0.10 m. by 0.06 m.
0.0975 m. by 0.055 m.
0.085 m. by 0.05 m.
0.075 m. by 0.045 m.
0.065 m. by 0.05 m.

The hooks suggest that the crosses were intended to hang on a vestment or perhaps on a string in front of an ikon. The latter custom is common in modern Greek churches.



14. Lamp with Loop Handle.

14. A broken lamp with loop handle, 0.09 m. diameter.

In North Sacristy.

15. A roughly woven white garment folded to fourteen thicknesses was found lying on the bench. It was bady damaged by termites, and no conclusion as to its shape could be made.

16. A wrought iron key with a wooden handle and iron ferrule.

17. Jar Sealing.

In South Sacristy.

17. A jar sealing of fine gray clay with five impressions of a saint on horseback treading on a beast.

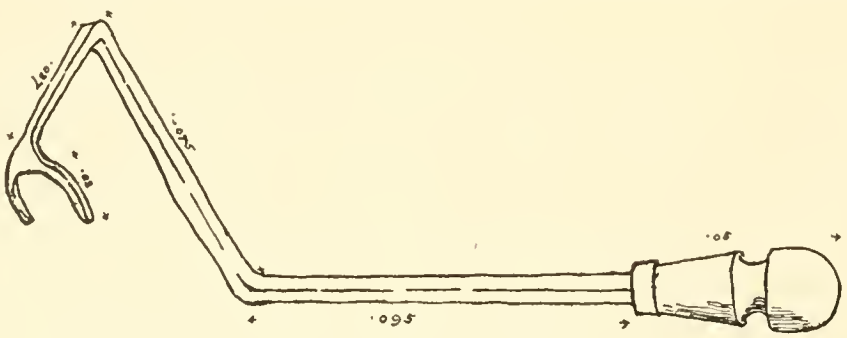
18. Fragment of a light iron strap hinge. The strap diminishing and terminating in a heart shape. Fragment 0.13 m. long.

19. Seven-wicked Lamp.

19. A broken lamp for seven wicks of rough red ware.

20. Fragment of plain circular lamp, red ware.

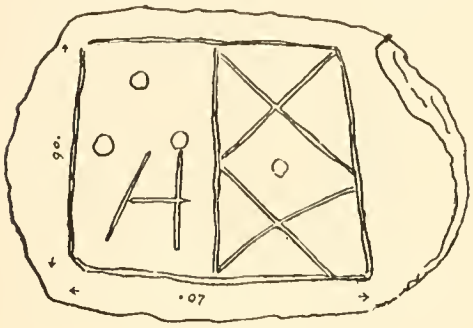
21. Some small fragments of parchment, inscribed.



16. Key with Wooden Handle.

In North Aisle.

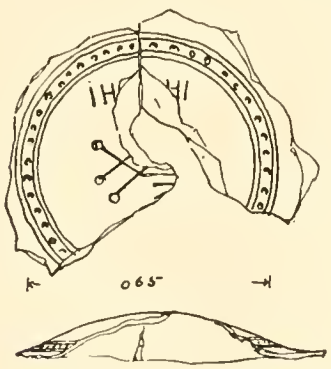
22. Several small fragments of parchment. (See note by Mr. W. E. Crum.)
23. A few yellow and green opaque glass beads of hemispherical form.
24. A rough sandstone stamp near north door.



24. Rough Stone Stamp.

In Nave.

25. A plain circular lamp of rough red ware 0.10 m. diameter.
26. A large sherd of dull red slip with a simple design of black horizontal lines with three short vertical lines above and swags.



27. Lid of Jar.

In South Aisle.

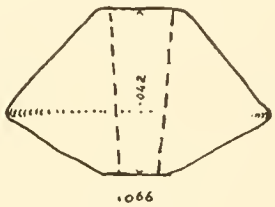
27. A broken fragment of the lid of some vessel in fine white well burned ware. It has an incised design of circular form and an indication of an inscription. The circular design is 0.065 m. in diameter.

In Northwest Chamber.

28. A damaged lamp, with an incised decoration, of fine red ware highly polished. (See Pl. 20*c*.)

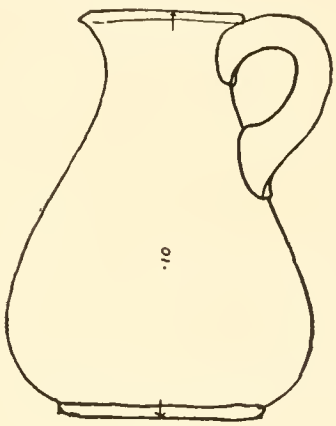
In Staircase.

29. In the space under the stairs was found a steatite ferrule for a staff similar to the Early Dynastic mace head in form. It is 0.065 m. in diameter and 0.04 m. high.



29. Steatite Ferrule.

30. A small jug with handle, lip and base ring, in a rough light red ware poorly burnt. It is 0.10 m. high and the base ring 0.05 m. in diameter.



30. Jug.

31. Forty-one brass bells were found in a heap on the floor of the space under the staircase. Several of them were badly damaged They are all about 0.035 m. to 0.04 m. high and are formed of two equal pieces soldered together. To the top a flat ring is attached and at the bottom there is a cut through the metal. A small piece of rough iron inside formed the striker. A photograph of a selection of these bells is shown on Pl. 38*a*.

OUTSIDE THE CHURCH.

Outside the Walls at the East End.

32. Part of an iron escutcheon 0.04 m. radius.
33. Some fragments of parchment.

IN THE CHAMBERS BELOW THE CHURCH.

Under the Sanctuary.

34. A well worked granite bowl 0.06 m. high and 0.155 m. diameter with four projections from the rim. (See photo. 000, Pl. 38*c*.)

Under the Nave.

35. A broken cup of plain red hæmatitic slip ware 0.12 m. diameter and 0.08 m. high.

Under Northwest Chamber.

36. A large rough jar of coarse red ware 0.60 m. high, 0.30 m. upper diameter and 0.60 m. at its greatest diameter.

37. A small fragment of papyrus with six characters upon it, probably Greek.

Lock Escutcheon.

INDEX

Abu-jeras, 6
Abu Simbel, 5, 12
Adda, *see* Kelaa-t-Adda
Addendan, 5, 22, 37-39
Adwa, 3
Aksheh, 22, 40
Alwah, 3
Aswân, 1, 2

Basilica, 11
Batn-el-Hagar, 3
Bawsaka, 6, 26
Begrash, 3, 4, 5, 26
Behen, 24, 48
Bells, 55
Bishoprics, 6
Blemyes, 2, 5, 24
Bowl, 20
Brickwork, 8
Brightman, Canon F. E., 36
Bucoras, 6
Butler, A. J., 1
Byzantine work, 7, 8, 25

Cairene churches, 1, 12, 15
Capitals, 5, 16, 37, 46
Cataracts, 2, 3, 5
Chalices, 35, 52, 53
Choisy, M., 8
Christianization of Nubia, 2
Columns, 5, 16, 25, 33, 37, 46, 47
Coxe, Eckley B., Jr., 2
Crosses, 54
Crowfoot, Mr. J. W., 12
Crum, Mr. W. E., 19, 29, 34, 51

Daira, 6, 26
Dating, 19, 29, 34, 49, 52
Debèreh, 14-21
Diocletian, 7, 19
Doll, 23
Domed Churches, 38, 39, 41-44
Dongola, 6
Dromic Churches, 11, etc., etc.

Eirpanome, 2

Faras, 5, 6, 15, 22-36
Figiranton, 12, 13
Fortress, Blemyan
Fortress, Egyptian, 40 41

Gardiner, Mr. A. H., 40
Glass, 19, 20, 30, 55
Glendinning, Mr. P. 12
Graves, 14, 23, 25, 29, 32

Halfa, 48-56

Ibrim, *see* Kasr Ibrim
Inscriptions, 34 and *see* Stelae
Ivory, 52

Jacobites, 2, 3
Jesu, Bishop, 29
Justinian, 2

Karanòg, 24
Kasr, Al, 2, 3
Kasr Ibrim, 4, 6, 7, 12
Kelaa-t-Adda, 5
Keys, 53, 54
Khartum, 3
Korta, 6, 19

Lamps, 19 27, 32, 34, 35, 54, 55

Mahaffy, Prof. J. P., 23
Makorrah, 2, 5, 6
Maks, 3
Maris, 3, 5
Martyrs, Era of, 19, 29
Meilnarti, 5
Mileham, Mr. H. R., 49
Monophysites, 2

Natron Valley, 1, 12
Nubia, Geography, 2, 3, 7

Paintings, 24, 39, 49, 50
Parchments, 20, 34, 35, 43, 51, 54
Petronius, 4
Pottery, 19, 20, 30, 35, 36, 52-56

Quatremère, E., 2, 5, 26

Sai, 6
Sandalwood, 35
Sandstone stamp, 20
Sayce, Prof. A. H., 23
Sealings, 35, 54
Shenoute, 29
Serreh, 40-47
Silko, 2
Steindorff, 19
Stelae, 19, 21, 29
Suenkur, 6

Temples, ancient, 24
Termus, 6
Theodora, Empress, 2, 7

Vaulting, methods of, 8, 9, 10

Wady Halfa, *see* Halfa
Wiss, 6, 14

Painting on Wood from Church at Halfa.

Original Size

(a) Begrash, the gate.

(b) Kasr Ibrîm from the north.

(c) Kasr Ibrim: View of the interior of the church, looking east

(*a*) Kelaa-t-Adda: View from the river.

(*b*) Wiss. The principal building from the north.

(*c*) Wiss: The principal building from the east

(*a*) View from the north.

(*b*) Interior looking east.

THE CHURCH OPPOSITE DEBÊREH.

(*a*) View from the south.

(*b*) View from the northwest.

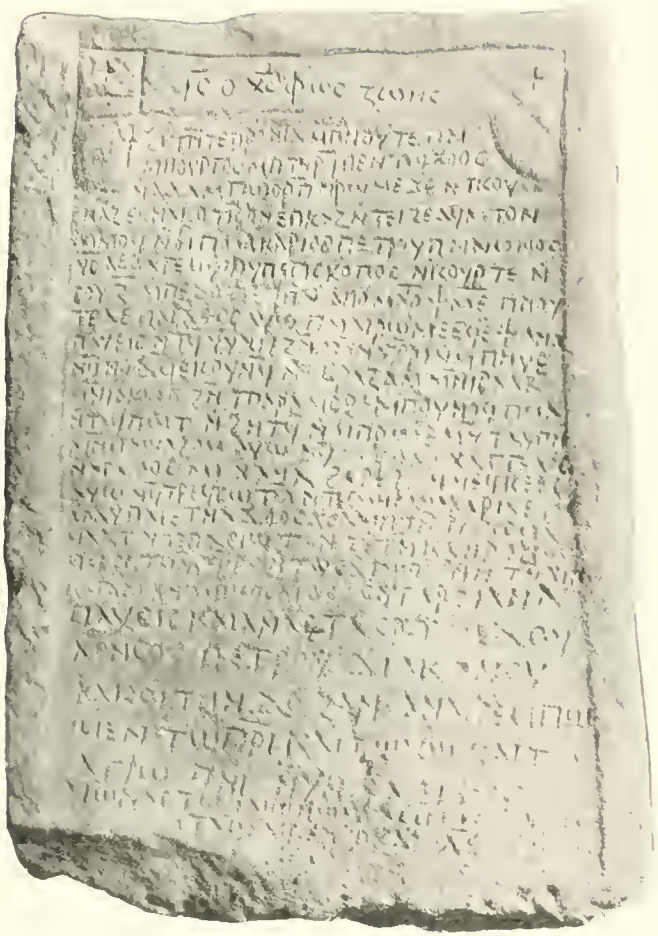
THE CHURCH OPPOSITE DEBÊREH

(*a*) Capital from Arch of Triumph.

(*b*) Cross design on lintel from north door.

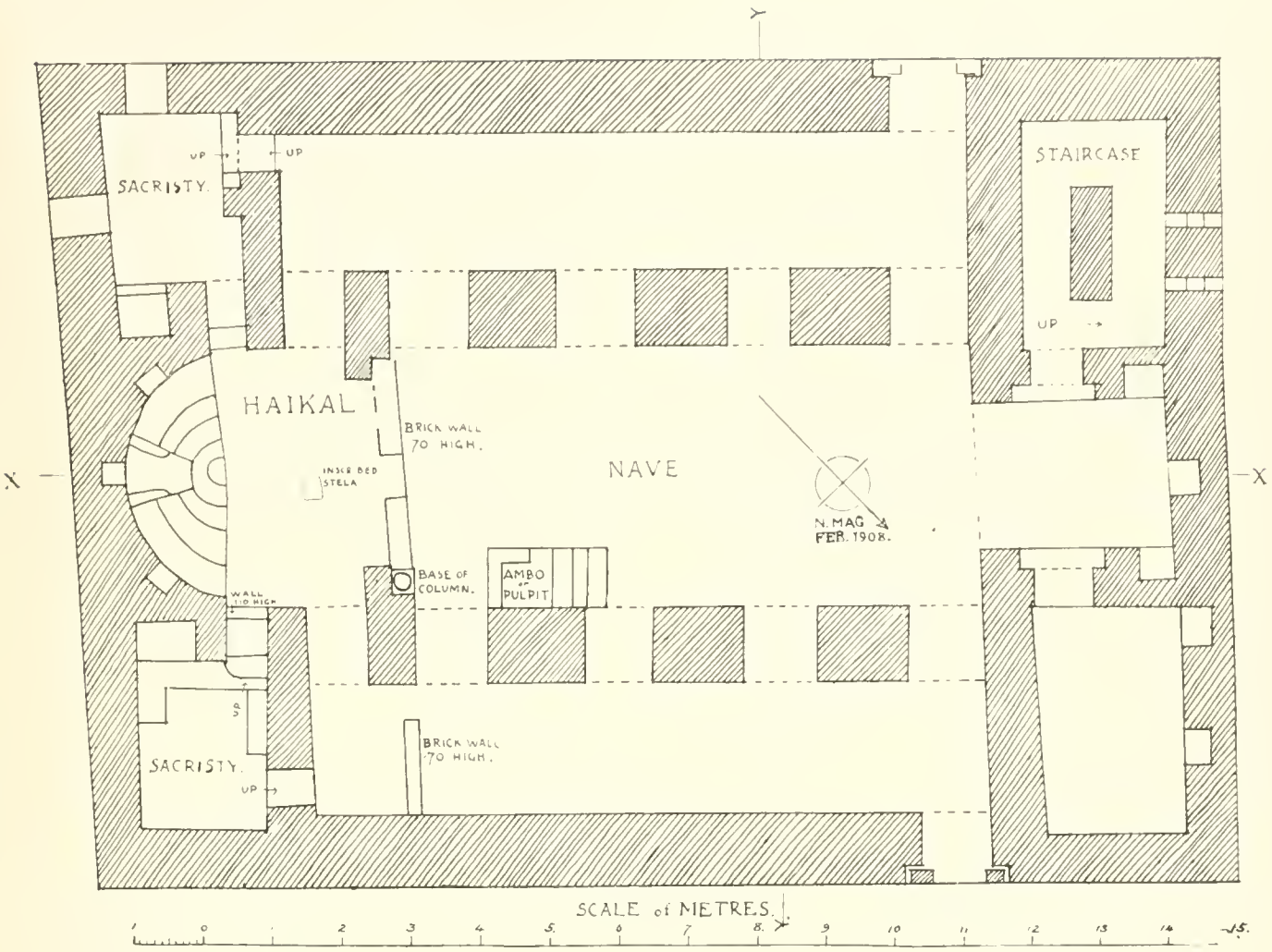
(*c*) Interior looking west.

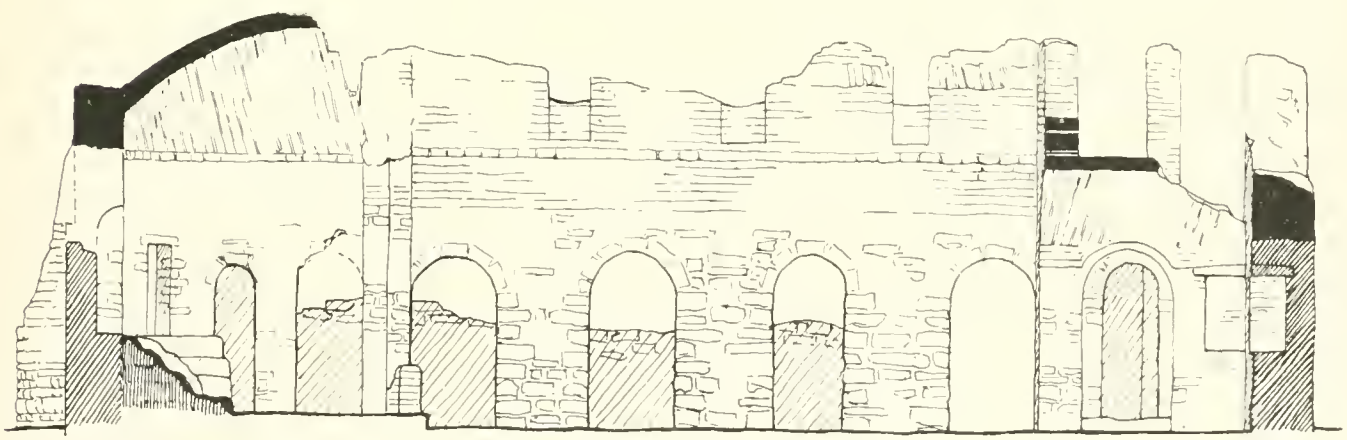
THE CHURCH OPPOSITE DEBÊREH.



Stela found in Haikal.

THE CHURCH OPPOSITE DEBÊREH.

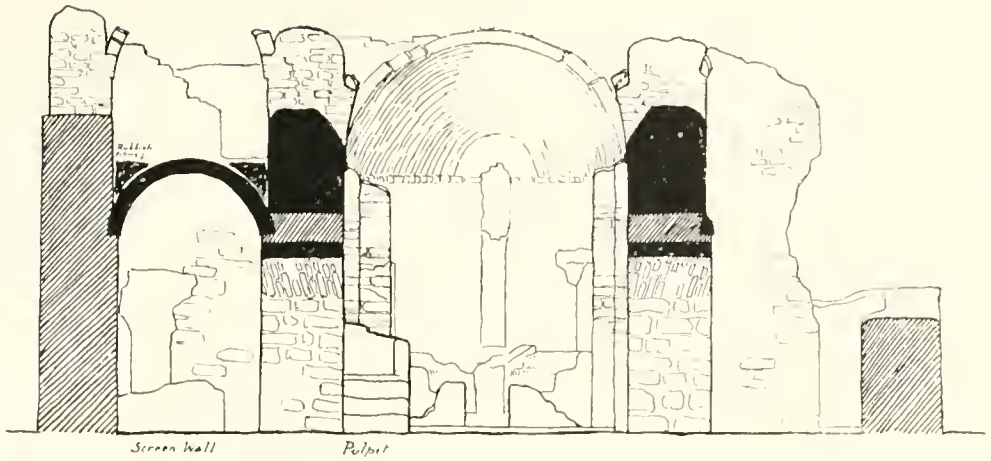




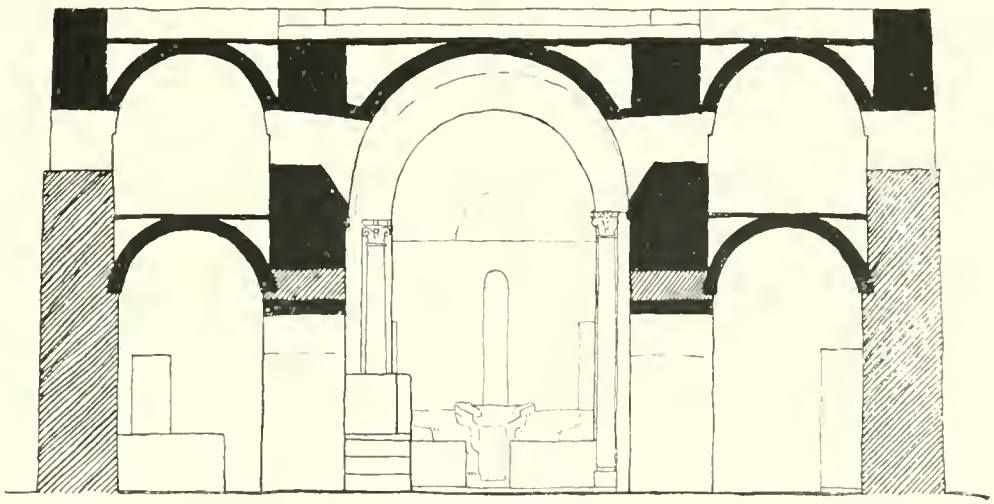
LONGITUDINAL SECTION.
X. ~ X.

Scale 1 100.

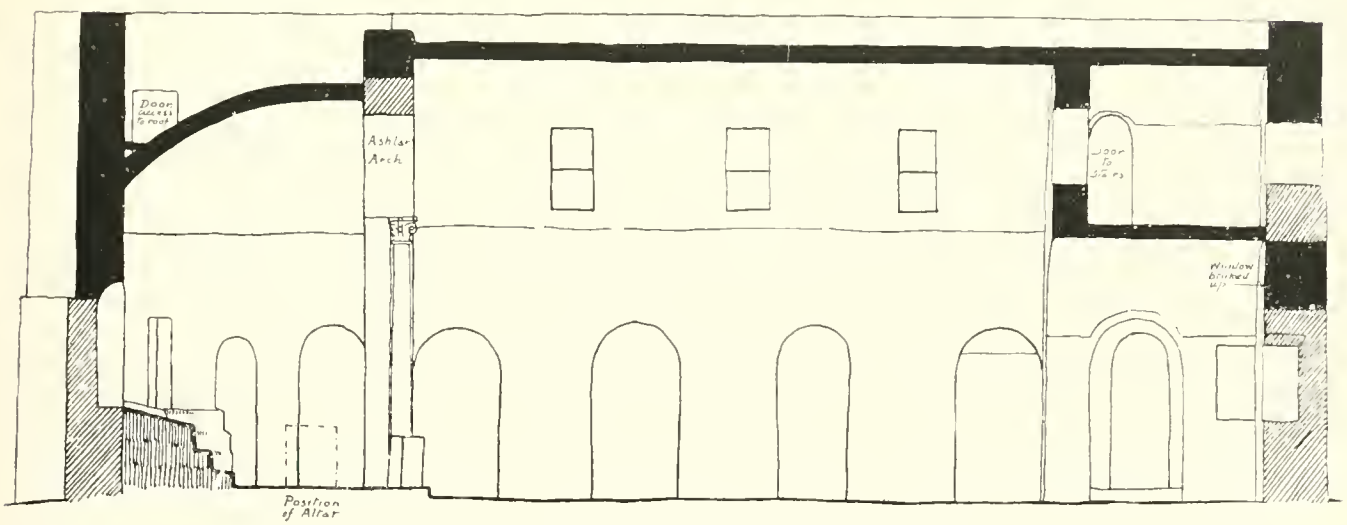
THE CHURCH OPPOSITE DEBÊREH.



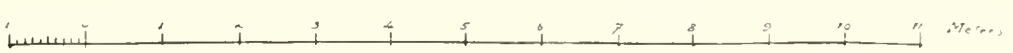
CROSS SECTION
Y~Y



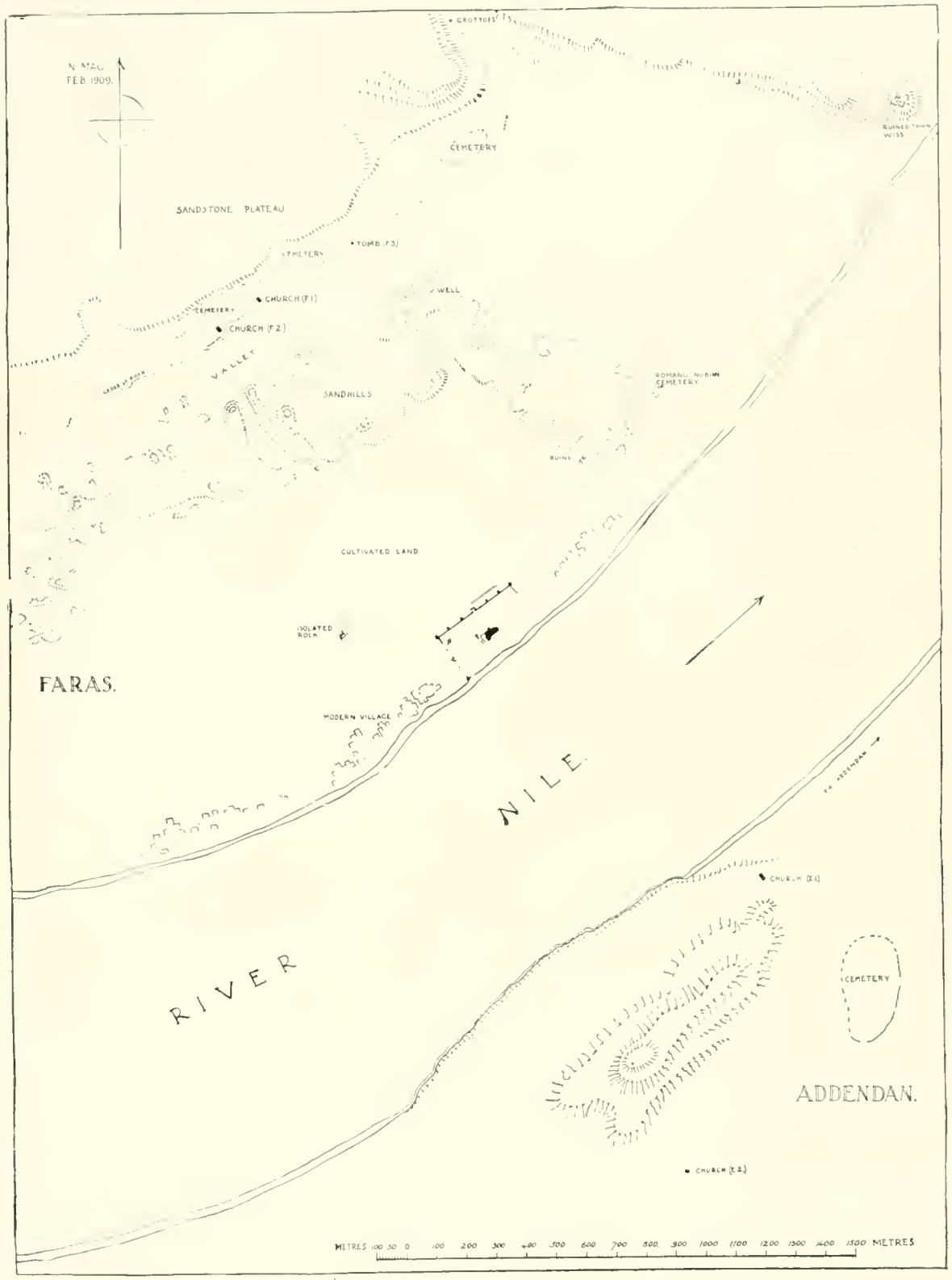
CROSS SECTION RESTORED



LONGITUDINAL SECTION RESTORED



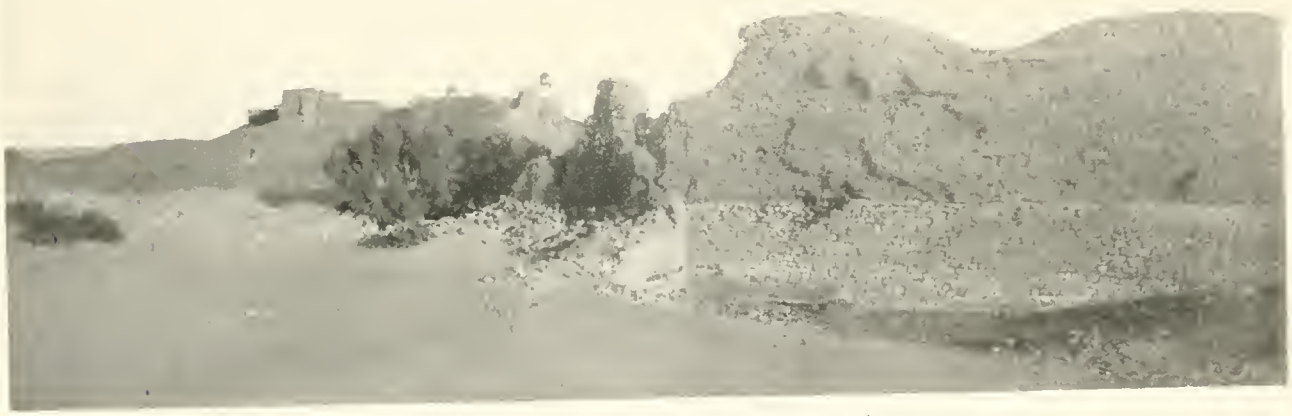
THE CHURCH OPPOSITE DEBÊREH.



SKETCH MAP OF THE DISTRICT OF FARAS.

(*a*) The central building from the north

(*b*) The central building from the southwest.



(*c*) The fortress wall and central building from the west.

FARAS, THE FORTRESS.

(*a*) Remains of church, partly rock-cut.

(*b*) The gate in the fortress wall.

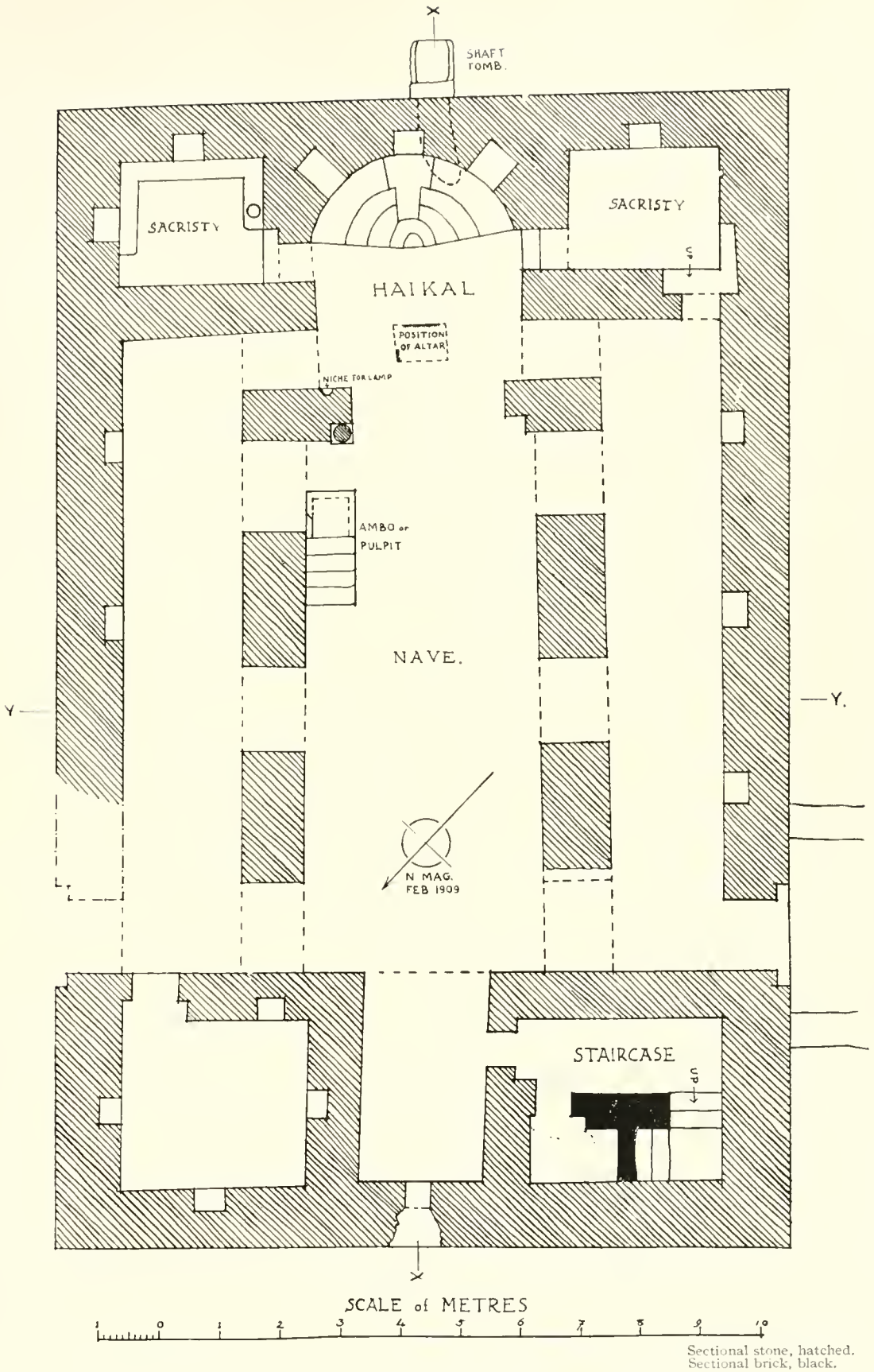
F. 1. (*c*) General view of Faras from the west. F. 2.

FARAS.

(*a*) Entrance to tomb at east of church.

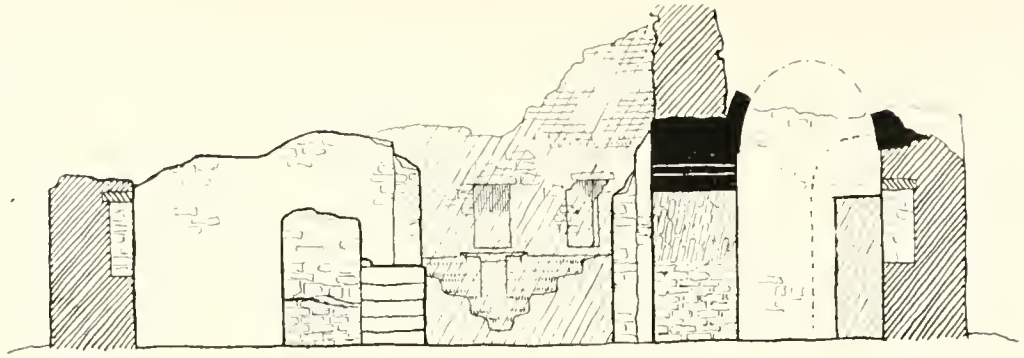
(*b*) Interior of church looking east.

FARAS, THE NORTHERN CHURCH

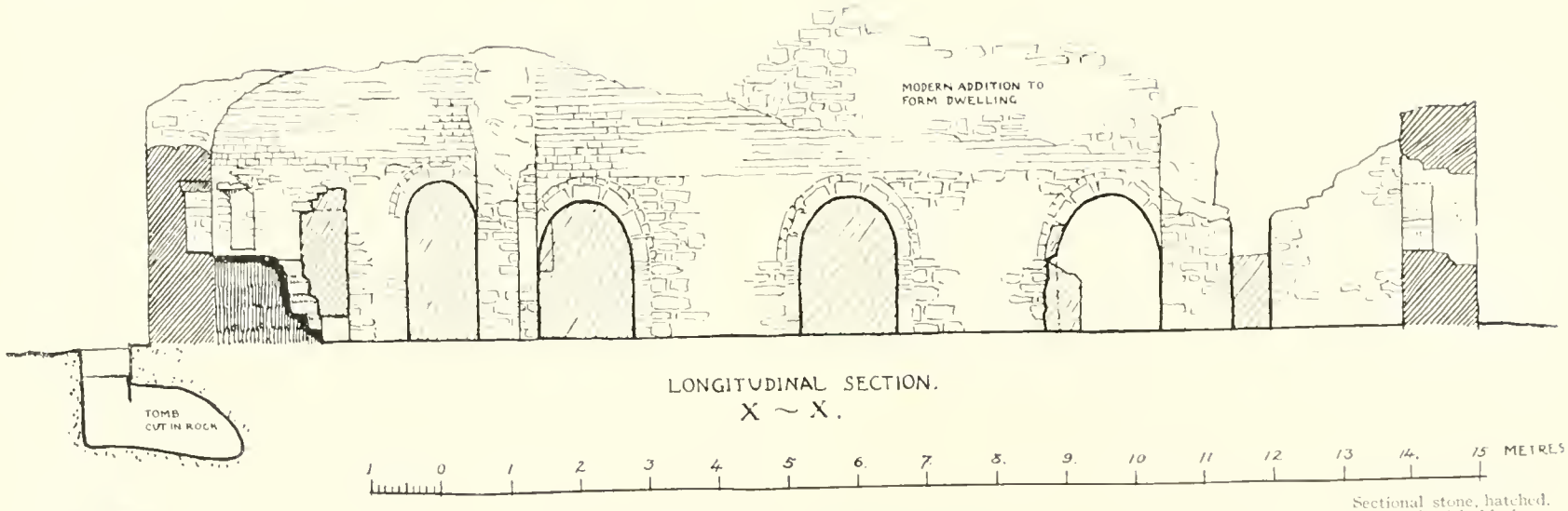


Scale 1 100

FARAS, THE NORTHERN CHURCH.



CROSS SECTION.
Y ~ Y



LONGITUDINAL SECTION.
X ~ X.

Scale 1 : 1

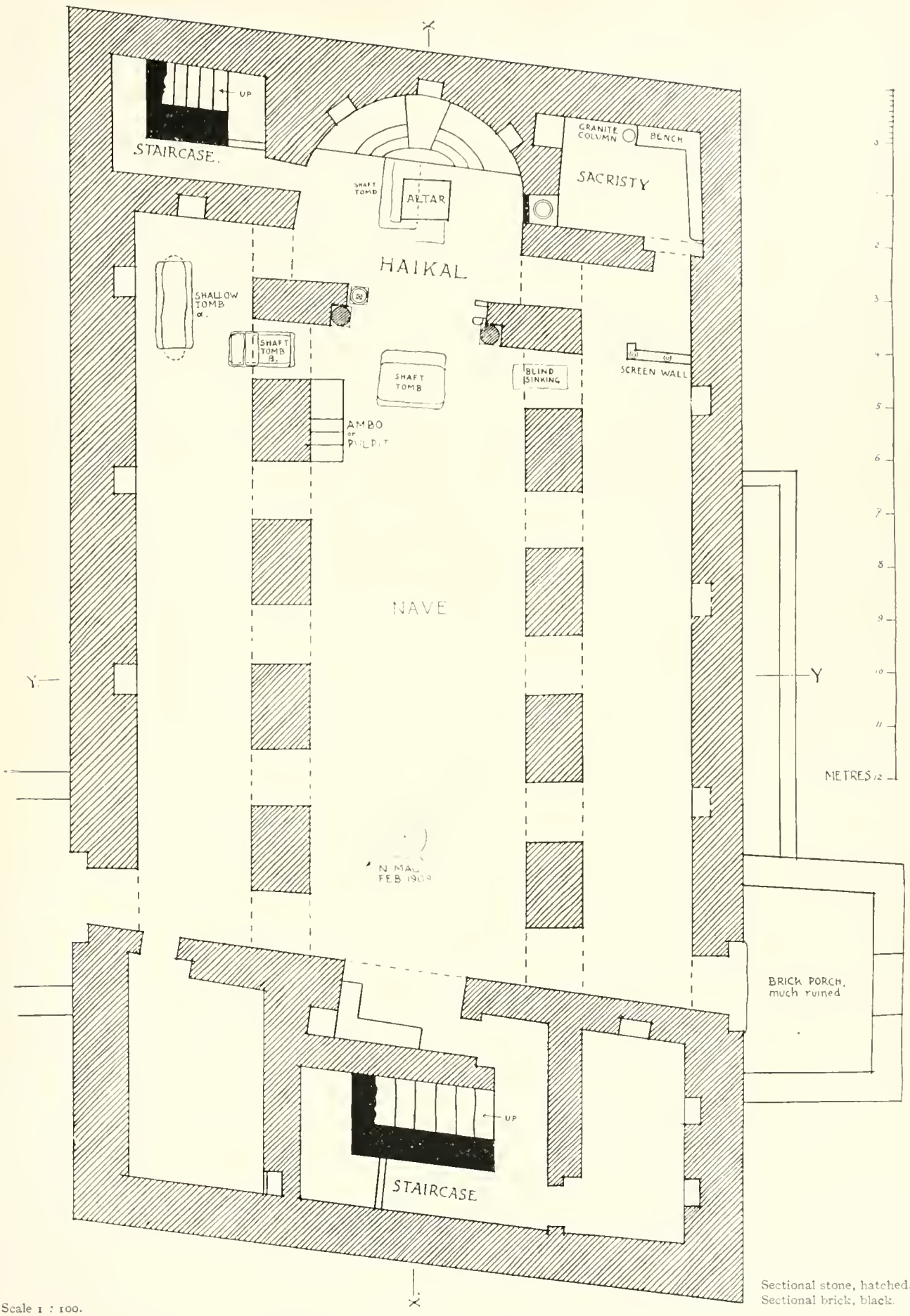
Sectional stone, hatched.
Sectional brick, black.

FARAS, THE NORTHERN CHURCH.

(*a*) Interior looking west, before excavation.

(*b*) Interior looking east, showing Tribune, altar and pulpit.

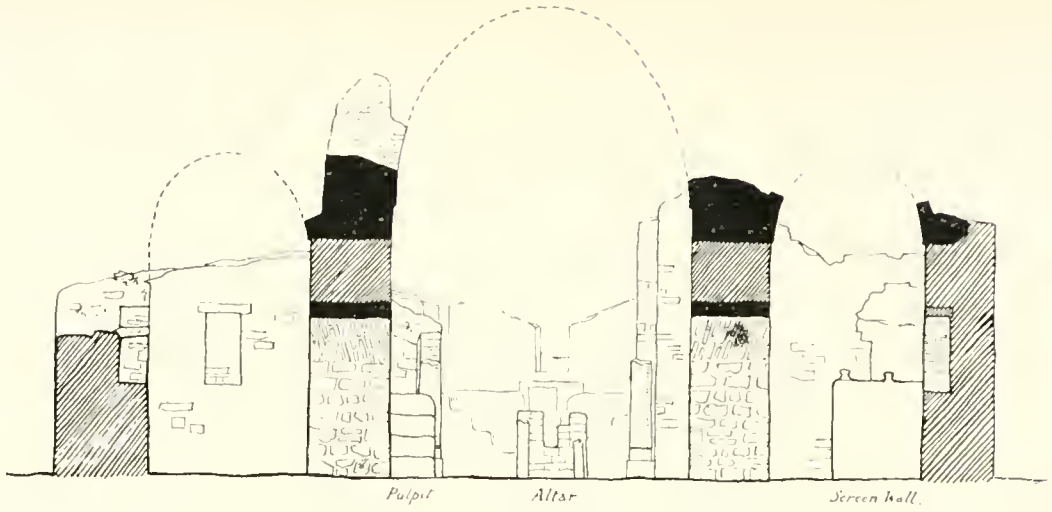
FARAS, THE SOUTHERN CHURCH.



Scale 1 : 100.

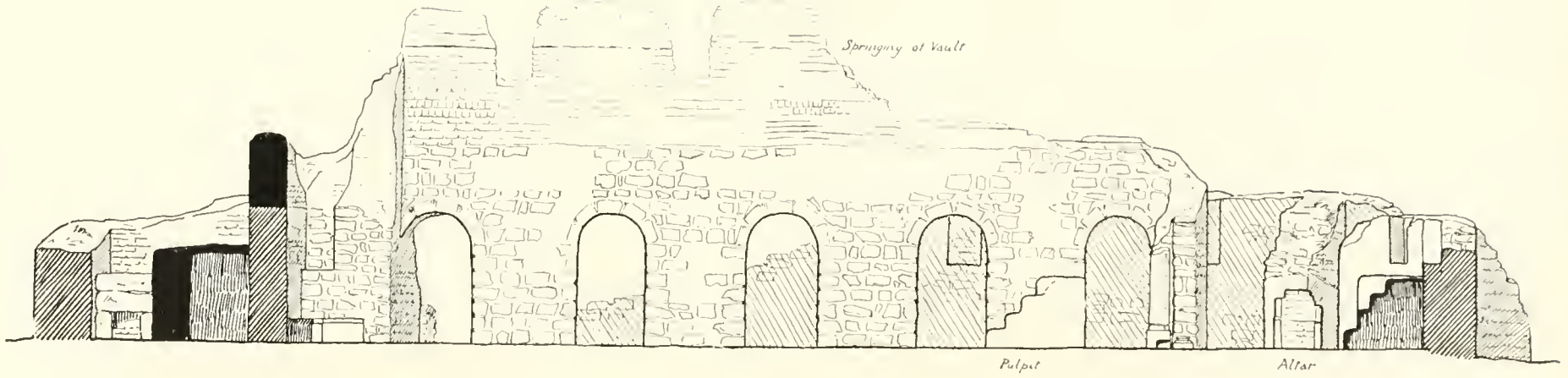
Sectional stone, hatched.
Sectional brick, black.

FARAS, THE SOUTHERN CHURCH.



CROSS SECTION

Y~Y.



LONGITUDINAL SECTION.

X ~ X

0 1 2 3 4 5 6 7 8 9 10 Metres

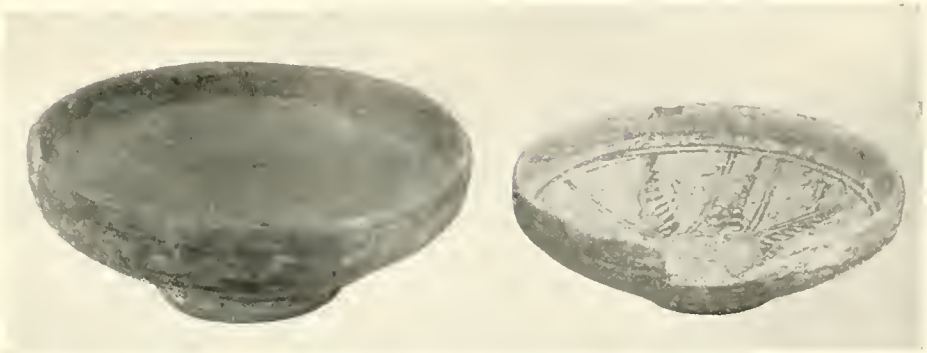
FARAS, THE SOUTHERN CHURCH.

Scale 1 : 100.

Sectional stone, hatched
Sectional brick, black.

(*a*) Cup or chalice from south church (F. 2.)

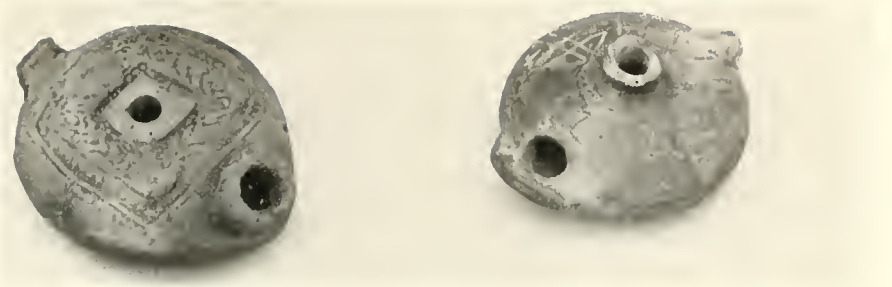
(*b*) Bowl from north church. (F. 1.)



(*c*) Bowls from north church, Faras. (F. 1.)

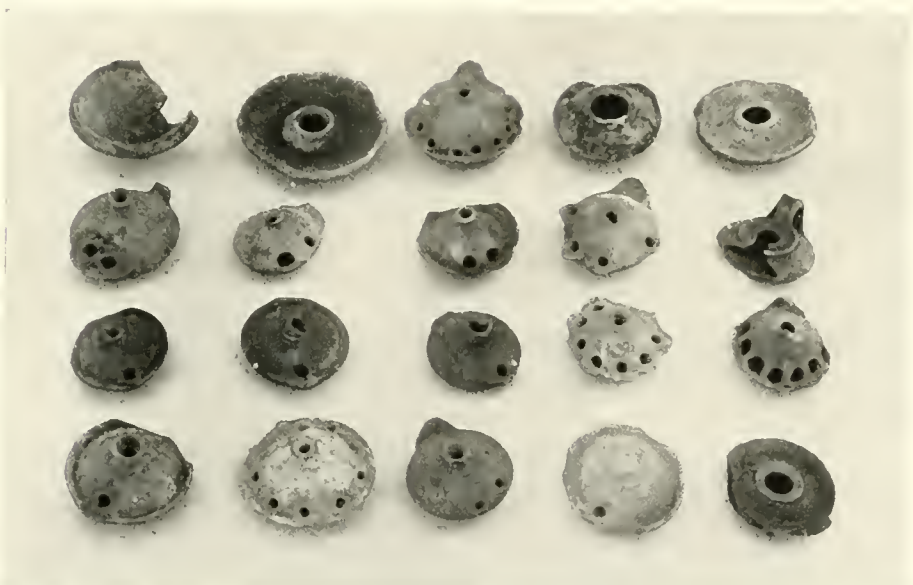
(*d*) Bowls from south church, Faras. (F. 2.)

FARAS—POTTERY FROM THE CHURCHES.



(*a*) From south church at Faras (F. 2.)

(*b*) From tomb in south church, Faras. (F. 2.) (*c*) From church near Halfa. (H. C.)



(*d*) Lamps from Faras and Halfa.

(*e*) Lamps from south church at Faras. (F. 2.)

POTTERY LAMPS.

(*a*) View from the south.

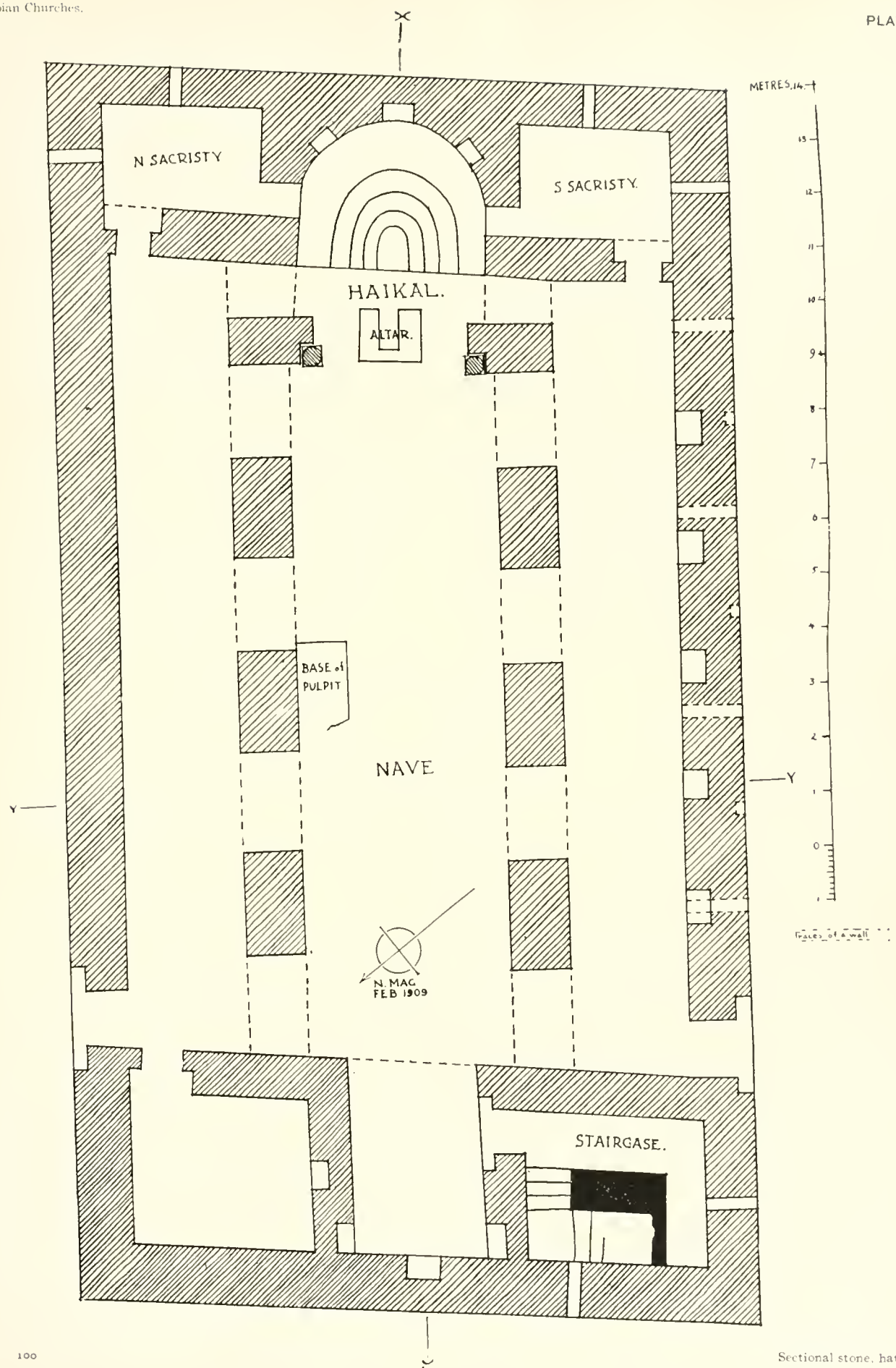
(*b*) Interior looking east.

THE NORTHERN CHURCH NEAR ADDENDAN.

(*a*) View of vaulting to the south aisle from the Haikal.

(*b*) The south aisle looking east.

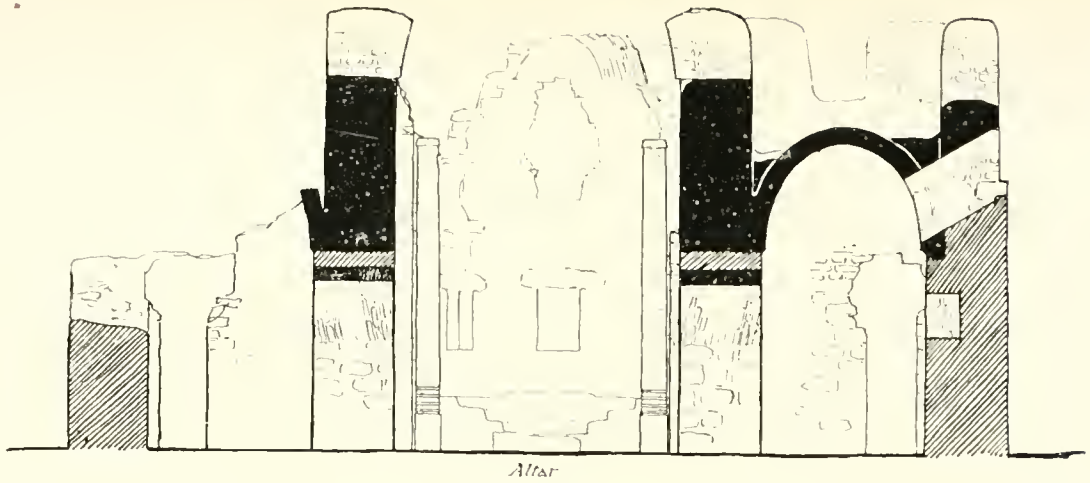
THE NORTHERN CHURCH NEAR ADDENDAN.



Scale 1 100

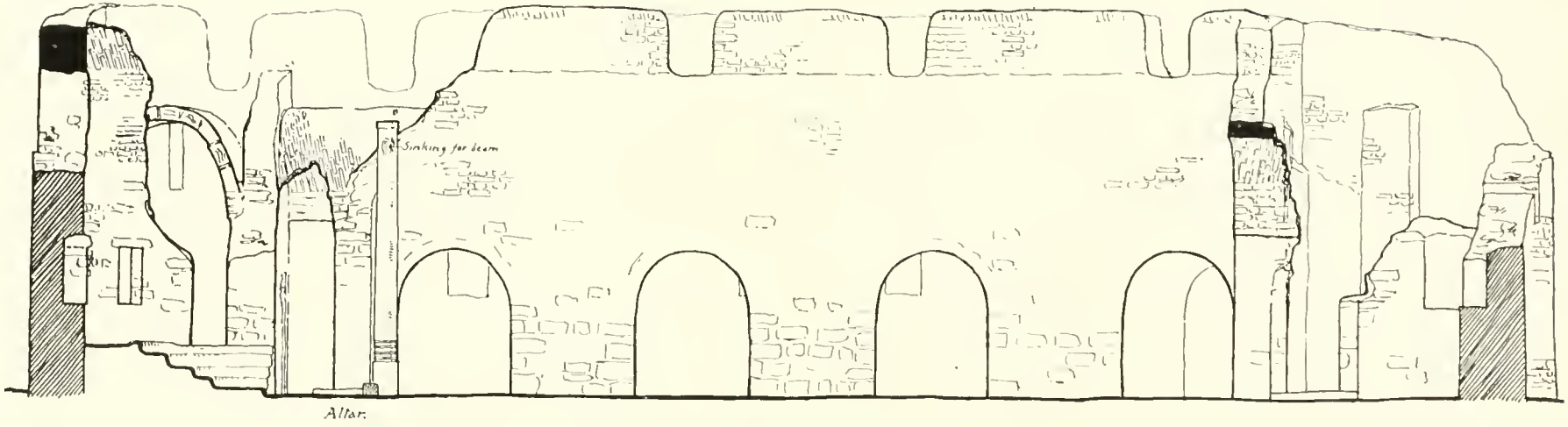
Sectional stone, hatched.
Sectional brick, black.

THE NORTHERN CHURCH NEAR ADDENDAN.



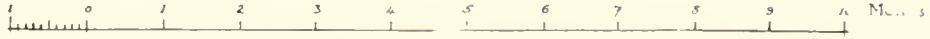
CROSS SECTION

Y~Y.



LONGITUDINAL SECTION

X ~ X.

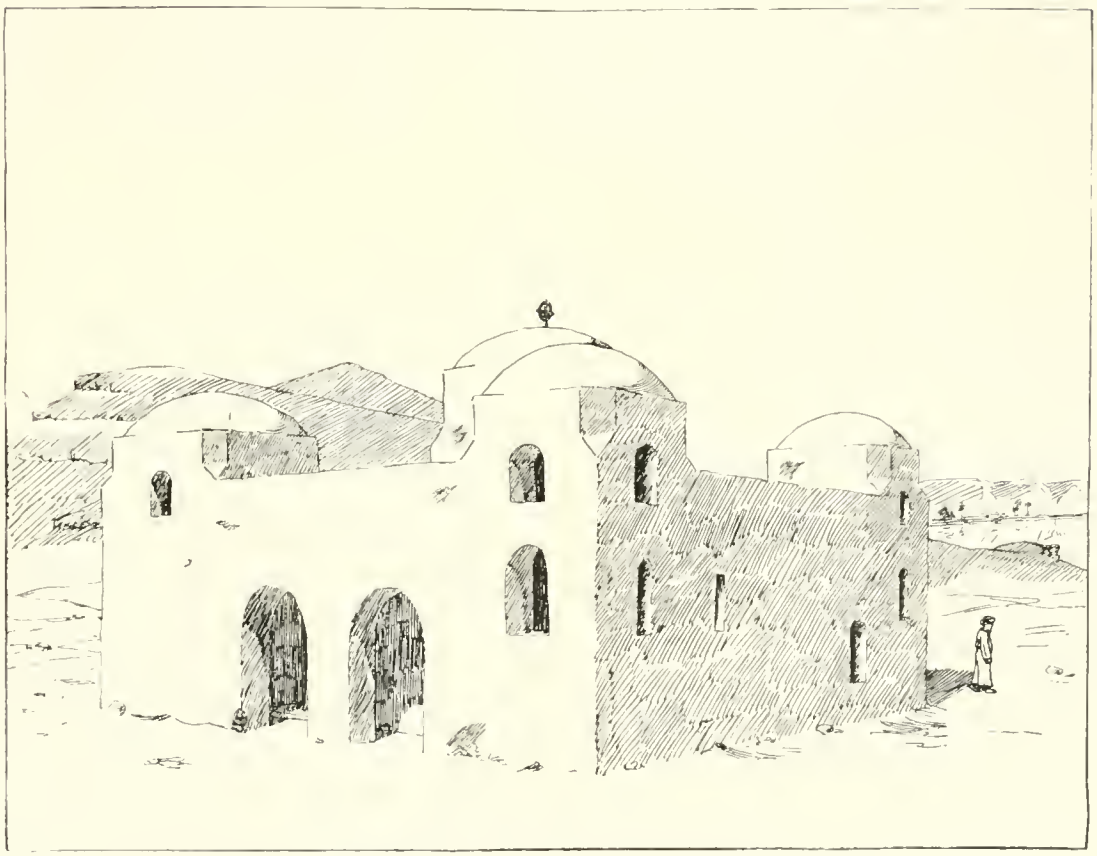


Scale 1 : 100

Sectional stone, hatched.
Sectional brick, black.

THE NORTHERN CHURCH NEAR ADDENDAN.

(*a*) View from southwest.



(*b*) Sketch of church (restored) from the southeast.

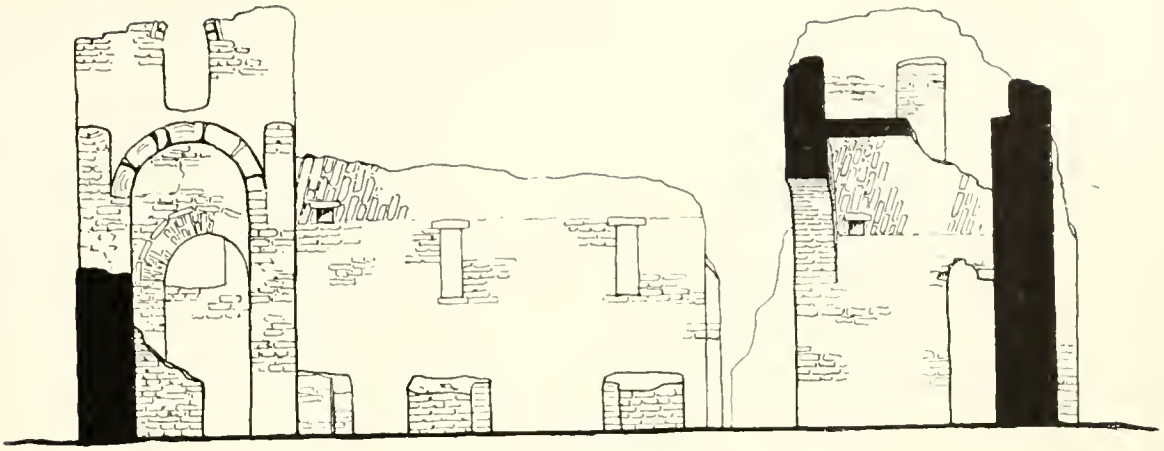
THE DOMED CHURCH NEAR ADDENDAN.

(*a*) Capital from the north church.

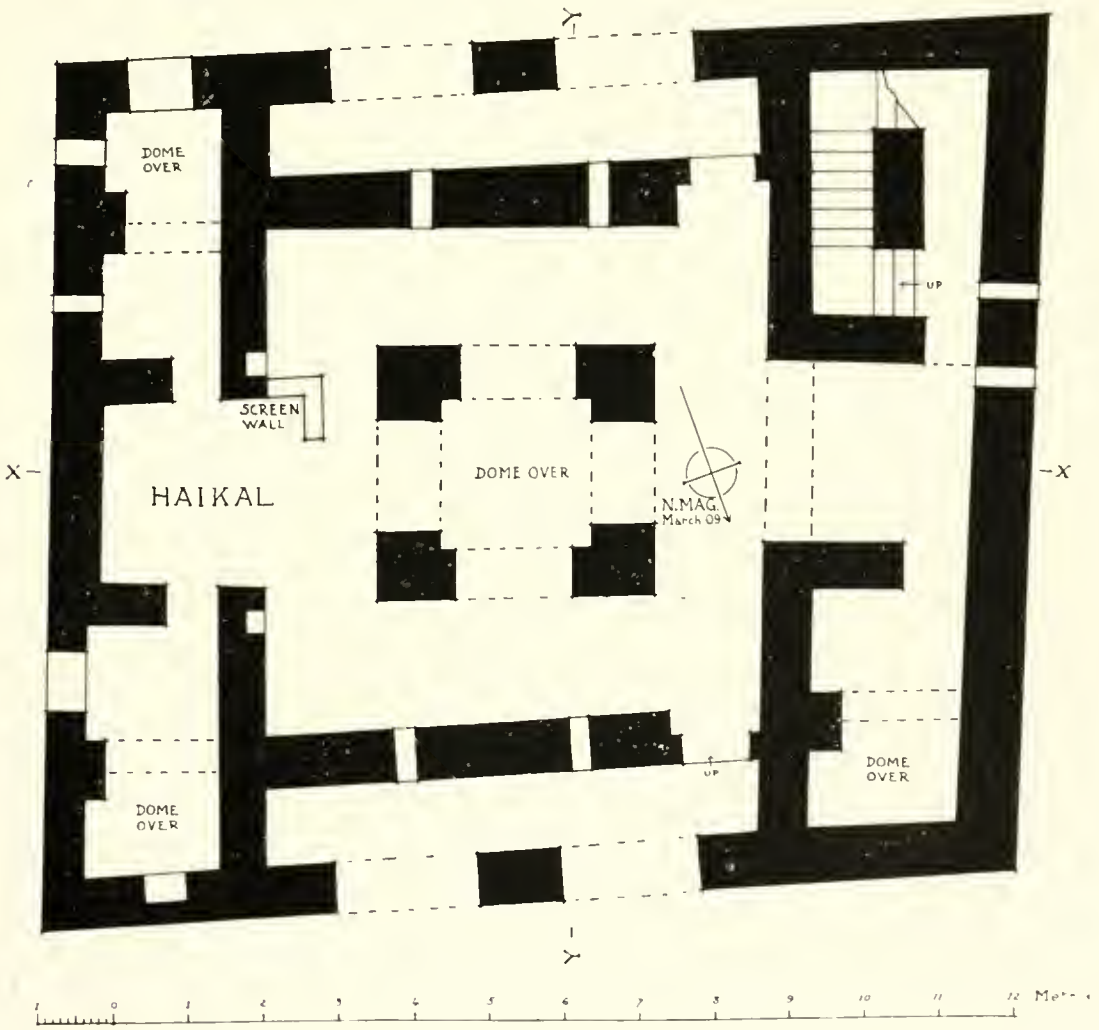
(*b*) The domed church, interior looking west.

(*c*) The domed church, southeast.
Cupola from inside

(*d*) The domed church, southeast.
Cupola from outside.



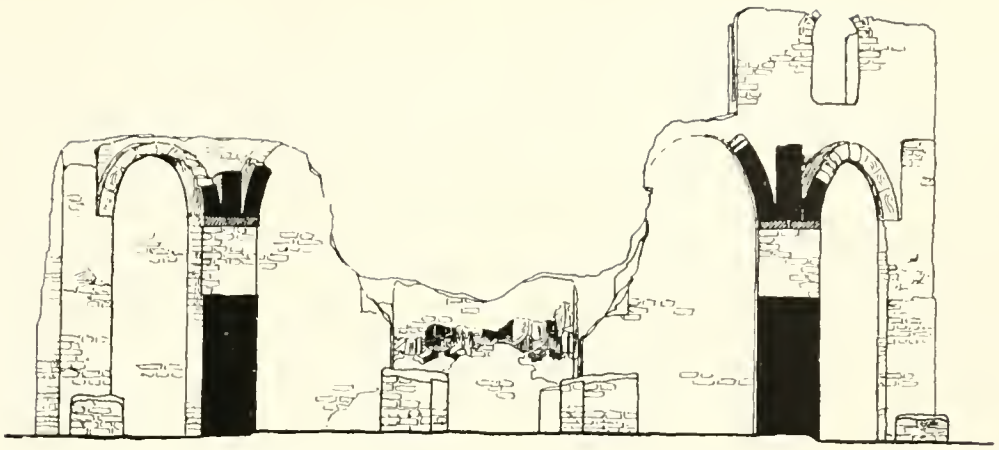
LONGITUDINAL SECTION
X ~ X



Scale 1 : 100.

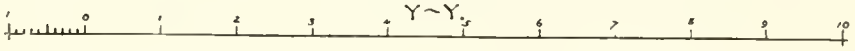
Sectional brick, black

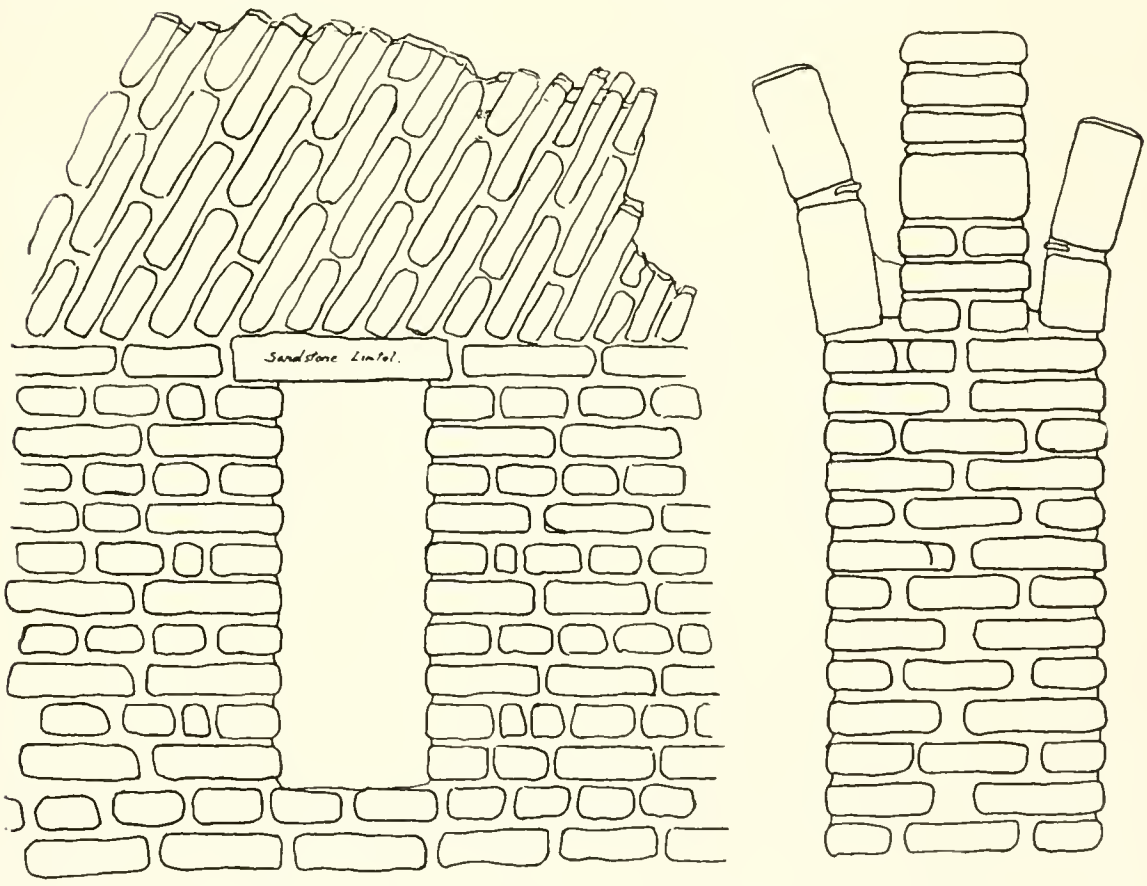
THE DOMED CHURCH NEAR ADDENDAN.



CROSS SECTION.

Y~Y.

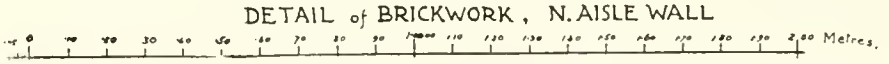




ELEVATION from NORTH.

SECTION.

DETAIL of BRICKWORK, N. AISLE WALL



Scale 1 : 100 and 1 : 20.

Sectional brick, black.

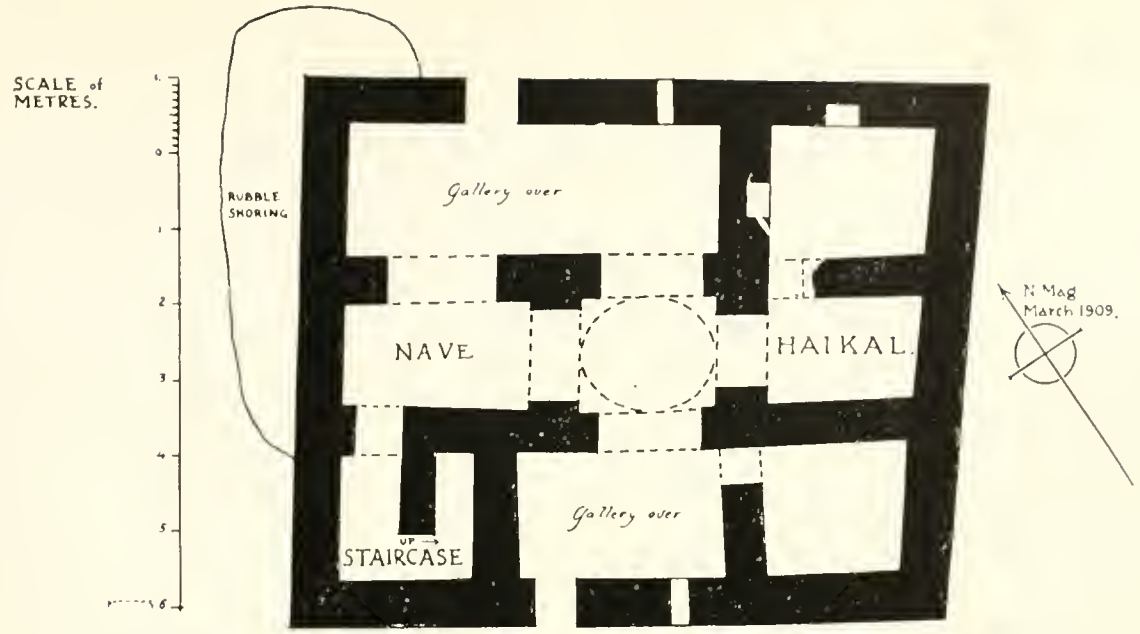
THE DOMED CHURCH NEAR ADDENDAN.

(*a*) View of southern half of the town.

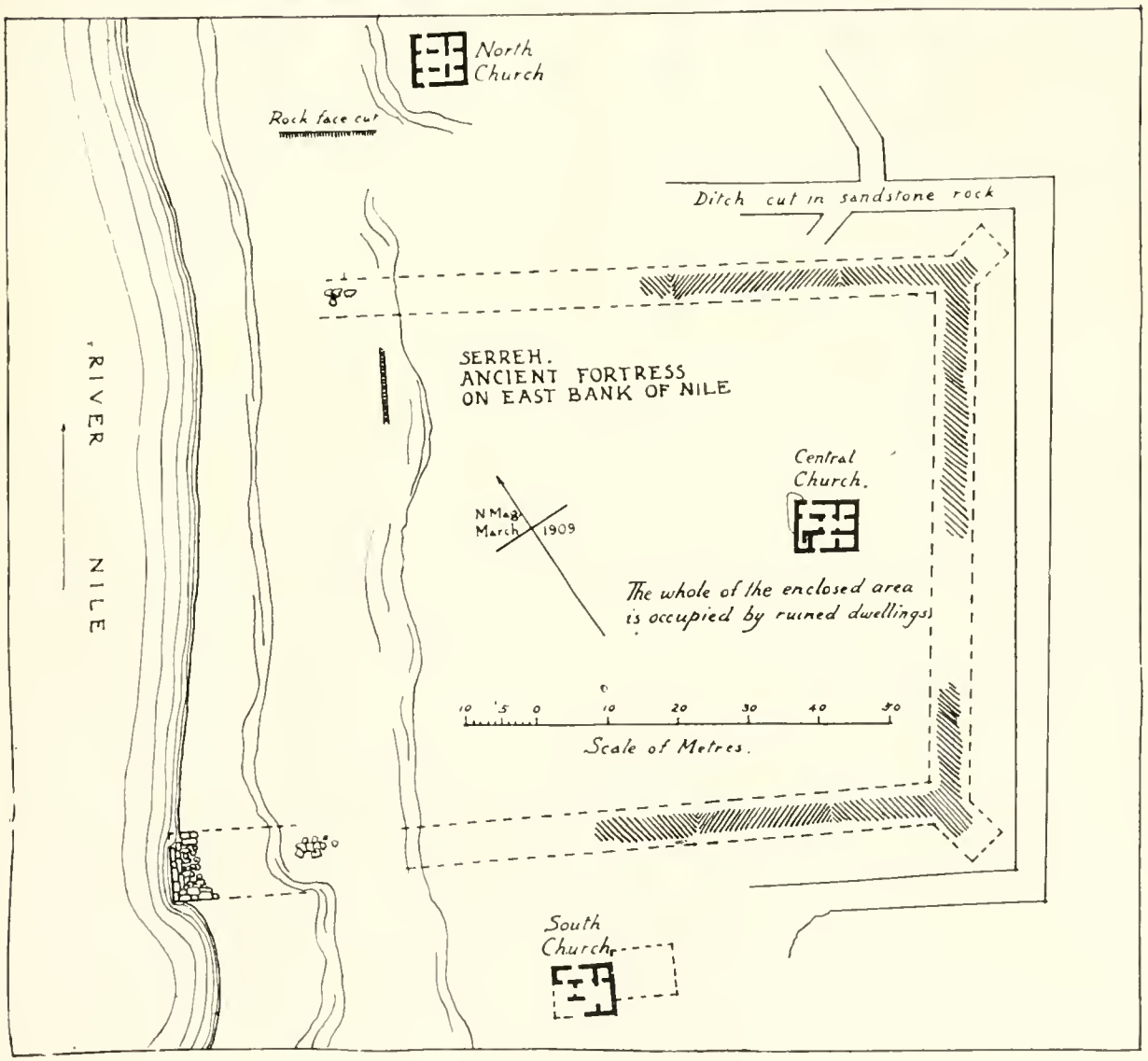
(*b*) View of northern half of the town

(*c*) General view of the town from the river.

EAST SERREH.



(*a*) Plan of central domed church.



(*b*) Plan of the fortress, showing position of the churches.

Scale 1 : 100 and 1 : 1000.

EAST SERREH.

(*a*) Interior looking east.

(*b*) View of dome from the south.

(*c*) View from the west.

EAST SERREH, THE CENTRAL DOMED CHURCH.

(*a*) The north domed church from the south

(*b*) The fortress wall, south side.

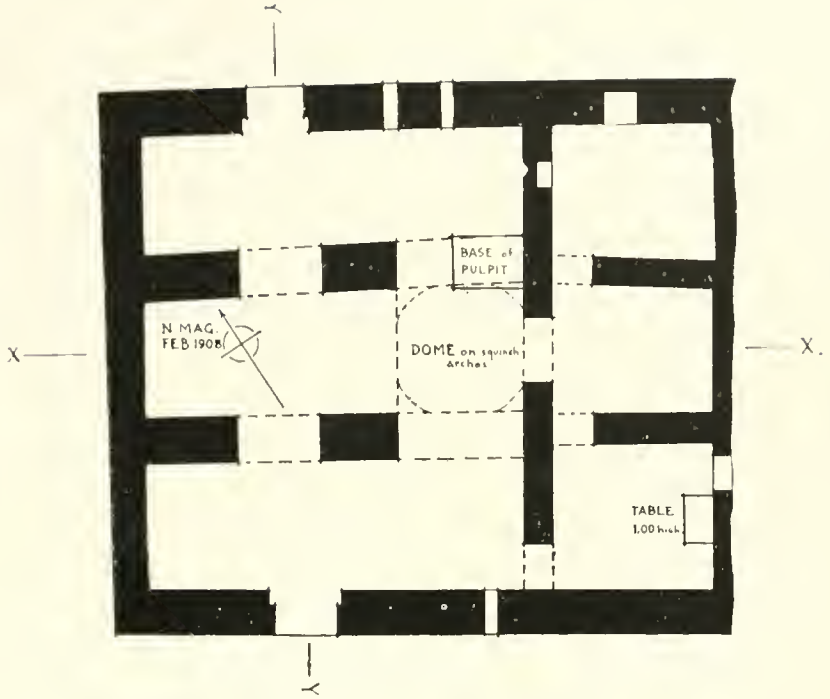
EAST SERREH.

(*a*) The north door.

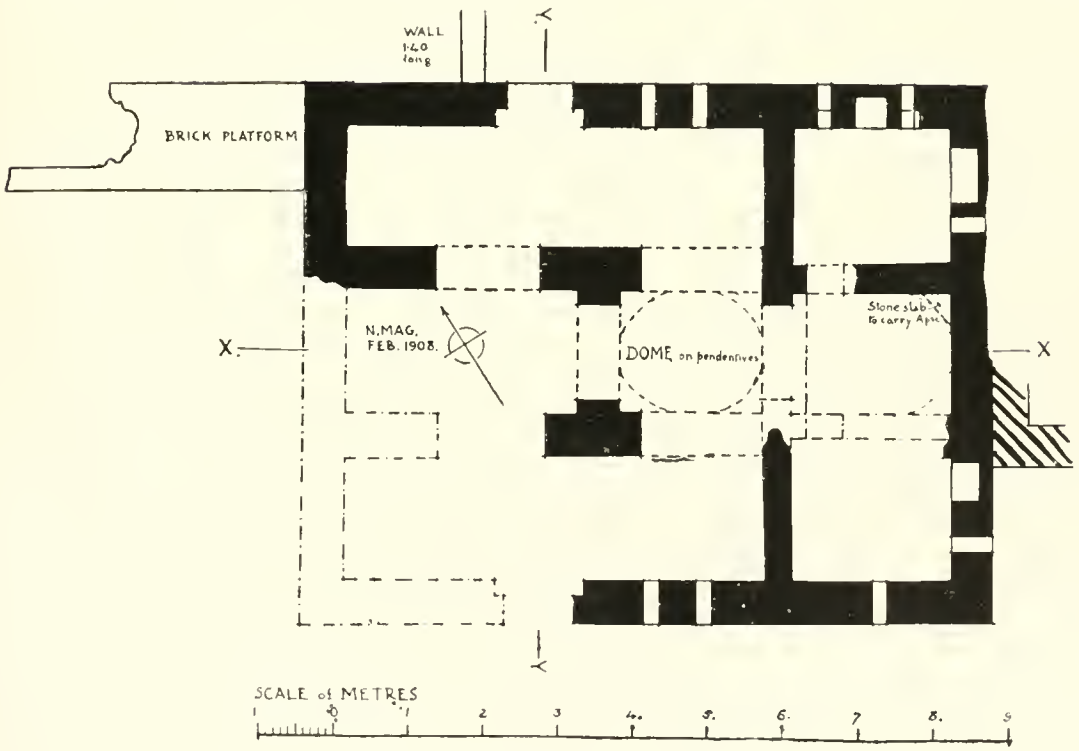
(*b*) View at roof level from northeast.

(*c*) View from the southwest.

EAST SERREH, THE SOUTH DOMED CHURCH.



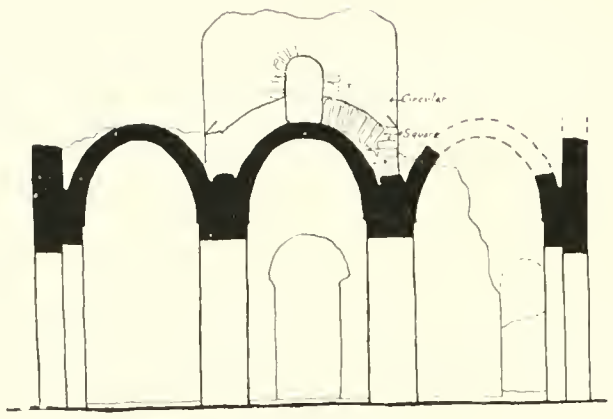
(*a*) Plan of the north domed church.



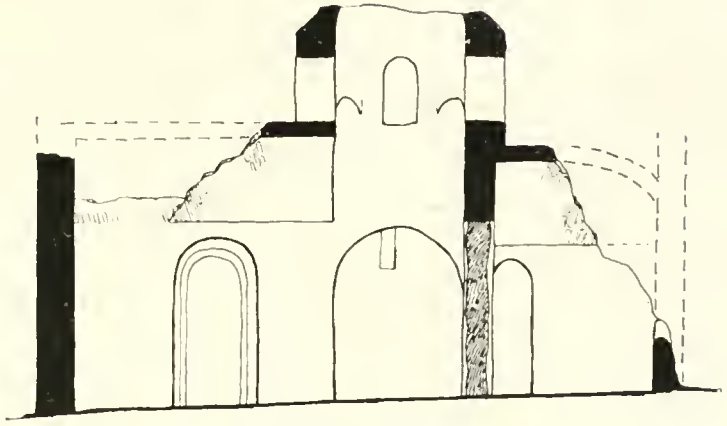
(*b*) Plan of the south domed church.

Scale 1 : 100. Sectional brick, black.

EAST SERREH, THE NORTH AND SOUTH DOMED CHURCHES.

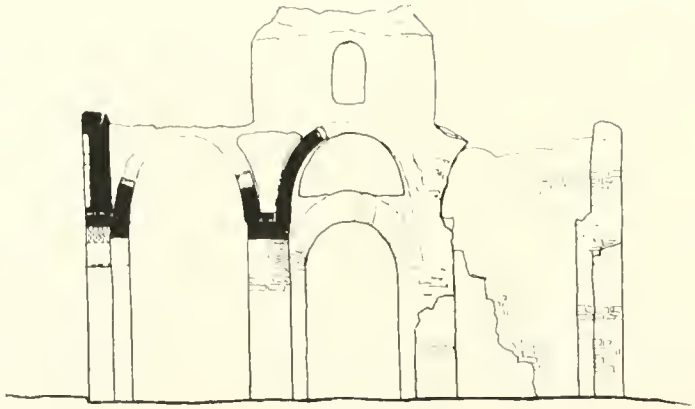


CROSS SECTION
Y~Y

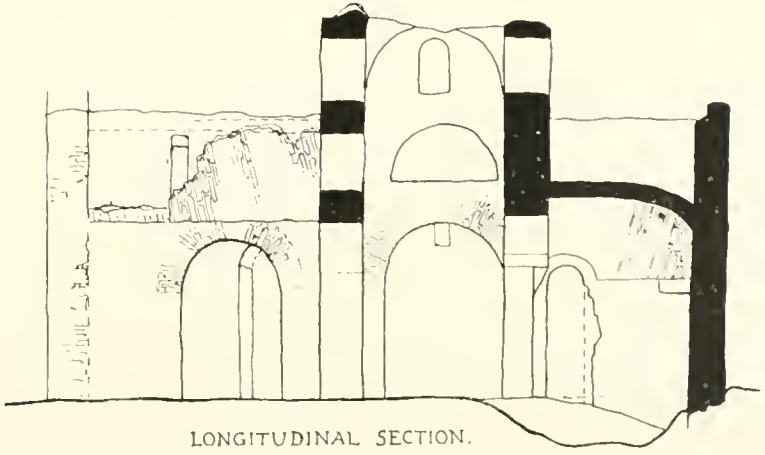


LONGITUDINAL SECTION.
X~X

NORTH DOMED CHURCH.

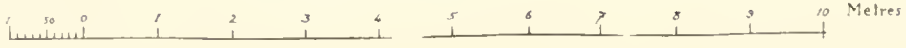


CROSS SECTION
Y~Y



LONGITUDINAL SECTION.
X~X.

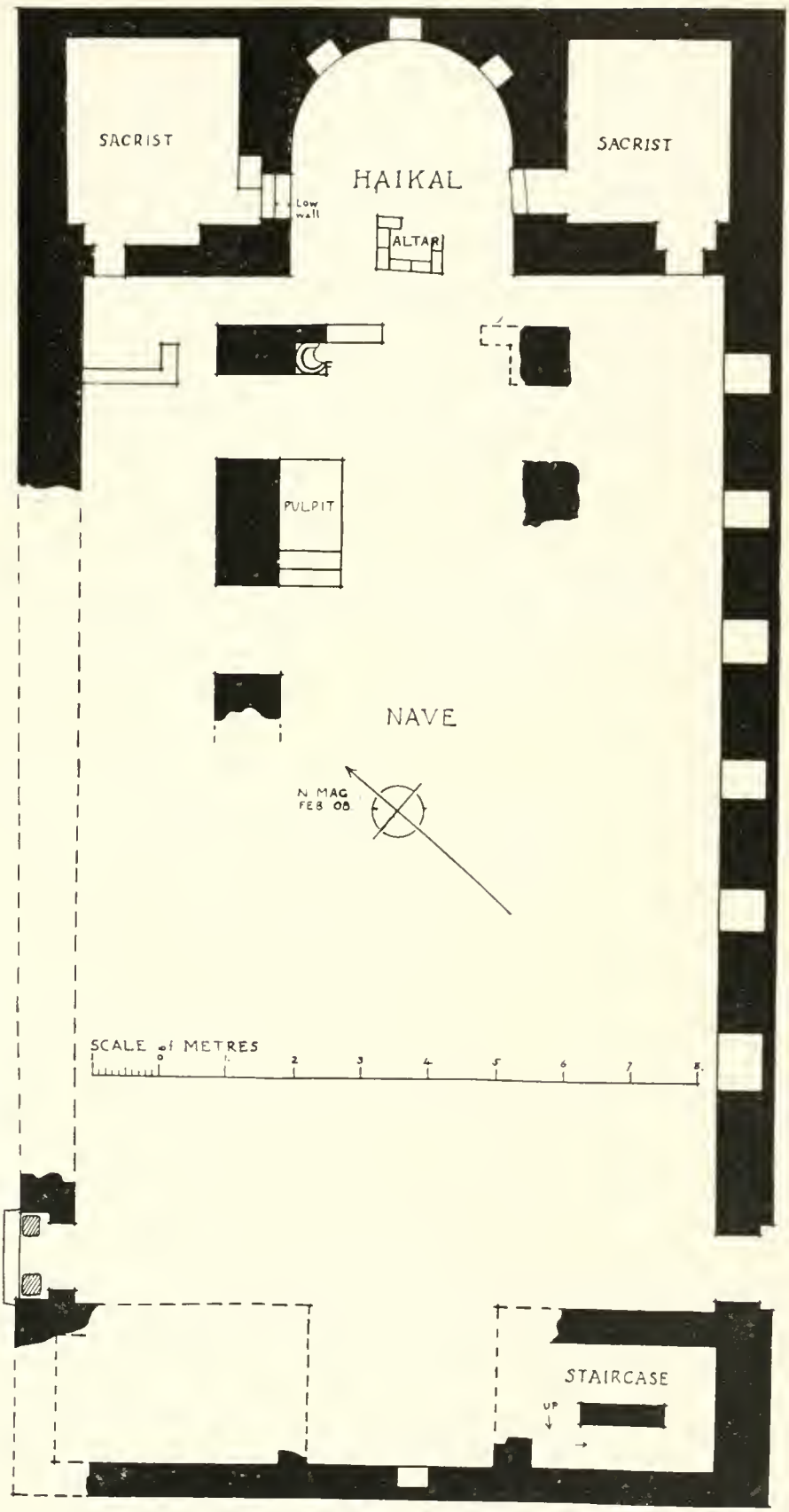
SOUTH DOMED CHURCH.



Scale 1 : 100.

Sectional brick, black

EAST SERREH, THE NORTH AND SOUTH DOMED CHURCHES.

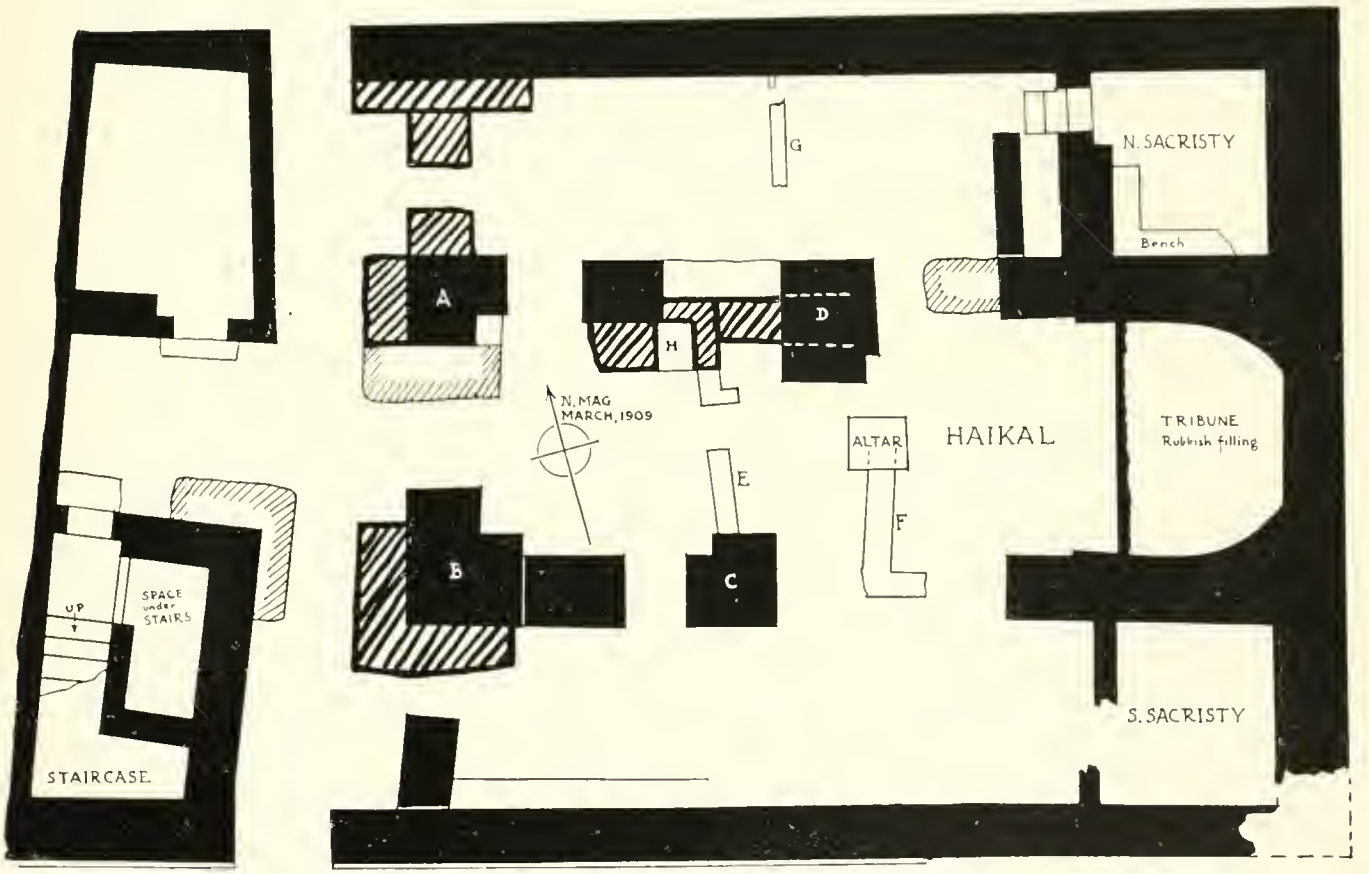


Scale 1 : 100.

EAST SERREH, THE SOUTH CHURCH.

Sectional brick, black.

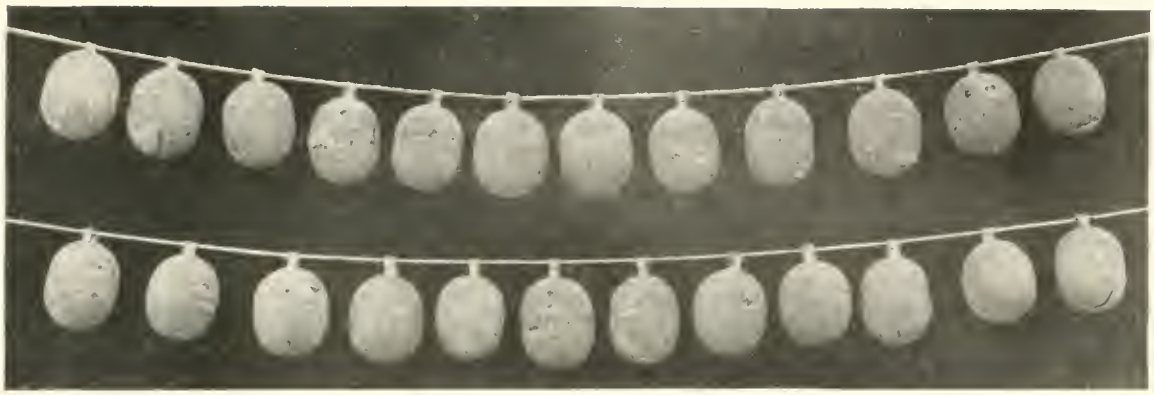
View from northeast, showing altar of latest period.



Scale 1 : 100

Sectional stone, hatched.
Sectional brick, black.

THE CHURCH NEAR WADY HALFA.

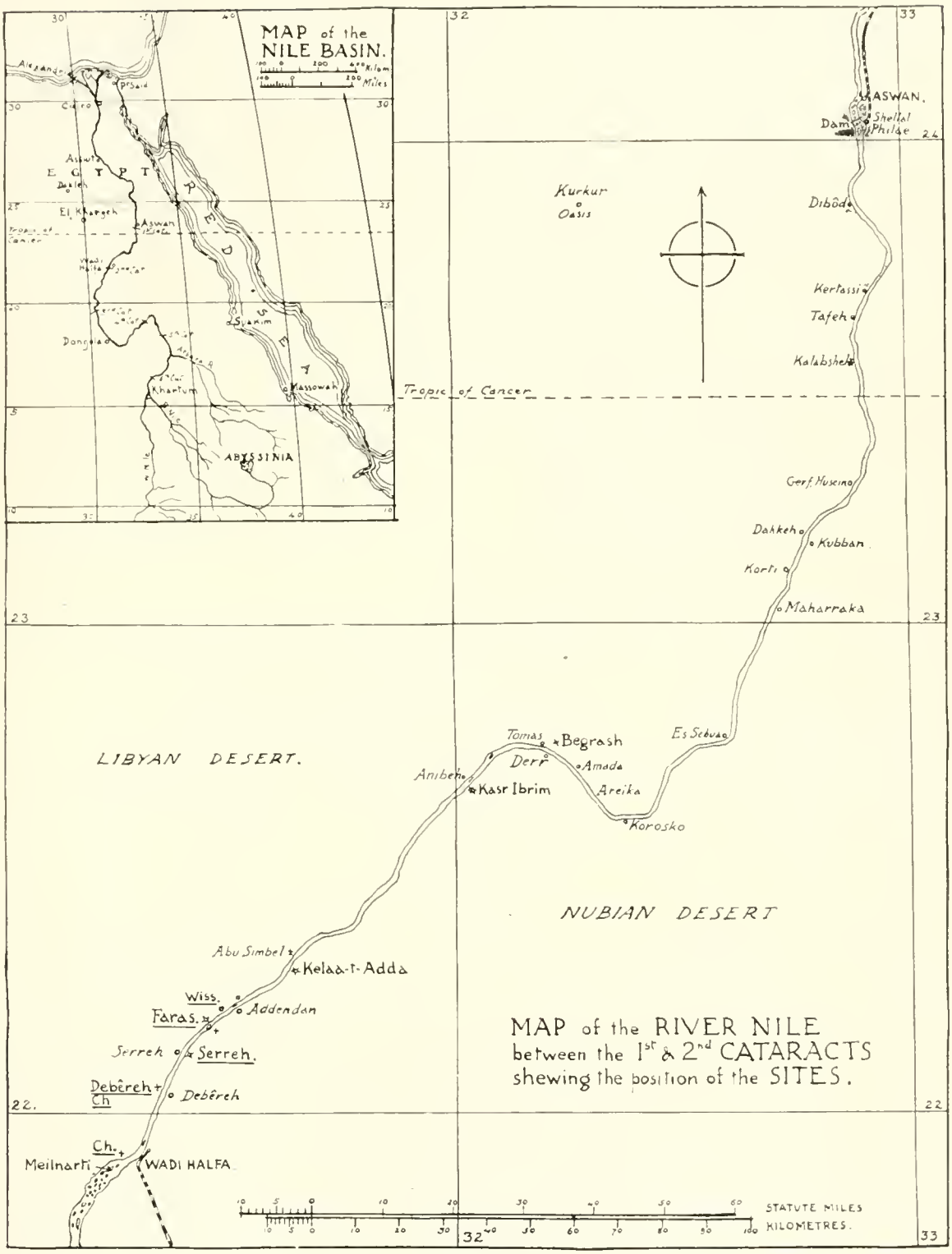


(*a*) Brass bells found in staircase.

(*b*) Iron crosses found in Haikal.

(*c*) Granite bowl.

THE CHURCH NEAR WADY HALFA.


MAP of the NILE BASIN.
EGYPT
RED SEA
Sinkim
Massowah
Khartum
Dongola
El Khargeh
Aswan
ABYSSINIA
Tropic of Cancer
Kurkur Oasis
ASWAN.
Dam
Shellal
Philae
Dibôd
Kertassi
Tafeh
Kalabsheh
Gerf Hussino
Dakkeh
Kubban
Korti
Maharraka
LIBYAN DESERT.
Tomas
Begrash
Es Sebua
Derr
Amada
Anibeh
Kasr Ibrim
Areika
Korosko
NUBIAN DESERT
Abu Simbel
Kelaa-t-Adda
Wiss.
Addendan
Faras.
Serreh
Serreh.
Debêreh Ch
Debêreh
Ch.
Meilnarti
WADI HALFA
MAP of the RIVER NILE between the 1st & 2nd CATARACTS shewing the position of the SITES.
STATUTE MILES
KILOMETRES.
22.
23
32
33